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THE FRAMINGHAM STUDY

An Epidemiological Investigation of Cardiovascular Disease

Section 27

Coronary Heart Disease, Atherothrombotic Brain Infarction, Intermittent Claudication--A Multivariate Analysis of Some Factors Related to Their Incidence: Framingham Study, 16-year followup

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An Epidemiological Investigation of Cardiovascular Disease

Editors: William B. Kannel, M.D. and Tavia Gordon

Section 27. Coronary Heart Disease, Atherothrombotic Brain Infarction, Intermittent Claudication--A Multivariate Analysis of Some Factors Related to Their Incidence: Framingham Study, 16-year followup.

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SECTION 27

Page

Introduction 1
The major factors 7
Variations of risk relationships by age and sex 13
Sex differentials 21
Variation by atherosclerotic event 22
Other characteristics 25
Predicting the event 32
The event as a "risk factor" 34
Summary and conclusions 41

Bibliography
Previous sections

Relative average odds Appendix A
Probability of developing coronary heart disease Appendix B
Discriminant analysis Appendix C
Discrimination between specified events Appendix D

CORONARY HEART DISEASE, ATHEROTHROMBOTIC BRAIN INFARCTION, INTERMITTENT CLAUDICATION--A Multivariate Analysis of Some Factors Related to Their Incidence: Framingham Study, 16-year followup

In this report the three major atherosclerotic diseases are considered--coronary heart disease (CHD), atherothrombotic brain infarction (ABI), and intermittent claudication (IC)--in relation to certain characteristics measured before the event. The main characteristics considered are blood pressure, serum cholesterol, cigarette smoking, glucose intolerance and left ventricular hypertrophy (LVH) on the electrocardiogram (ECG). Also examined in passing are a number of other characteristics and some of the separate categories of CHD.

This report should be examined with Section 26 of this series at hand. In that section there is a systematic display, one variable at a time, with respect to the same characteristics and the same disease outcomes. The criteria used and the measurement procedures are described there. The study design and execution have been described in Sections 1 and 2 of this series as well as in a number of articles cited in the Bibliography.

This section compares the role of each of the key characteristics taking into account the interplay of these characteristics in determining the probability of developing each of the clinical events. In strict terms this is a consideration of statistical association but the findings carry implications for etiology and prevention.

Assume that:

$$p(\underset{\sim}{x_i}) = 1/(1 + e^{-[\alpha + \Sigma\beta_i x_i]})$$

where $p(\underset{\sim}{x_i})$ is the probability of the event and x_i is the observed value of the ith characteristic. The logistic parameters α and β_i are derived from measurements of the characteristics $(\underset{\sim}{x_i})$ on each examination (or if a measurement is missing on the examination, from the first earlier available measurement). Incidence is defined by events occurring in the interval following the measurement. Except where otherwise noted the interval is two years.

This general model is applied in a number of different ways in this report, but the calculations for Table 4 may serve as an example. For each event a separate computation of the logistic parameters by the method of Duncan-Walker was made for each ten-year age group between 45 and 74. In any age group a person may appear repeatedly as long as he remains free of the disease and as long as he remains in the specified age group; but when he is measured on an examination his new measurement is used to characterize him on that examination. Since each person is growing older during the period of followup he may move from one 10-year age group to the next and contribute to information at two or three age levels. Other particulars on this subject are given in Section 26.

The key parameter arising from these computations is β_i. This may be taken as representing the strength of the association between the ith characteristic and the disease. The larger the β_i the steeper the slope of incidence on the characteristic. The α is largely a function of the level of incidence. Where comparisons are to be made between characteristics, the β_i is standardized by multiplying it by the population standard deviation for the ith variable. This puts all the variables on a comparable scale.

In addition it is sometimes useful to summarize the age-specific β's or standardized β's by averaging them. This is done (in the usual fashion) by weighting them with the inverse of their variance $([\sum_i \beta_i/V(\beta_i)]/\Sigma(1/V(\beta_i))$.

In presenting the trend in disease incidence across the various levels for each variable in Appendix A, the relative average odds associated with each level is calculated. The first step is to calculate an odds ratio $(p/(1-p))$ for each individual. An average odds ratio is then determined for a level by summing the odds ratios for all the persons at that level (or in a specified class) and dividing by the number of persons. The relative average odds are then calculated by dividing this average by the average odds ratio for all persons in the age-sex group.

Three different relative average odds are computed. One is the "actual" relative average odds, which assumed that the p for all persons at a level is the same as the actual (sample) incidence at that level. Another is called "smoothed-1" and is based on the univariate regression (β) for that variable. Assuming that $p = 1/1 + e^{-(\alpha + \beta x)}$ the odds ratio $(p/(1 - p))$ is $e^{\alpha + \beta x}$. The odds ratio for each person is computed on the basis of his value for the characteristic $\underline{x}$ and the estimated values for α and β. (The value for α need not enter into the computation of the relative average odds). The "smoothed-2" relative average odds are computed the same way except that the appropriate multivariate β is used. The values for the other ("nuisance") variables are assumed fixed, only the variable on question being allowed to vary from person to person. No matter at what level these "nuisance" characteristics are fixed they can be ignored in the computation of the relative average odds, just as the value of α can be ignored. The trends in the smoothed relative average odds reflect the value of the specific β_i and the significance of a trend is measured by the test on the specific β_i.

One last remark before turning to the actual data. This report not only re-characterizes individuals at each examination but the analytical techniques rest heavily on the multiple-logistic model. Previous reports have been largely based on characterization of the person's traits at initial examination only and usually relied on categorical analysis--and, of course, were based on shorter followup. In a few instances the earlier findings appear to differ from the present findings. We have tried to assess each point of discrepancy carefully and arrive at a balanced judgment but obviously such variant conclusions suggest that the data are not quite conclusive.

TABLE 1. Standardized univariate regression coefficients of various characteristics for Coronary Heart Disease, Atherothrombotic Brain Infarction, and Intermittent Claudication by sex and age: Framingham Study, 16-year followup.

	Number of cases		Systolic Blood Pressure		Serum Cholesterol		Glucose Intolerance		Cigarettes		LVH-ECG	
Age	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
					CORONARY HEART DISEASE							
45-54	114	43	.292	.403	.384	.260	.183	.202	.323	.120	.128	.168
55-64	173	111	.397	.514	.186	.240	.122	.104	.142	-.040	.299	.251
65-74	47	45	.234	.473	.035	.510	.286	-.016	.045	-.239	.198	.402
Average												
Mean			.340	.477	.257	.296	.172	.124	.186	-.024	.234	.262
Standard error			.048	.056	.050	.058	.044	.057	.055	.076	.039	.046
					ATHEROTHROMBOTIC BRAIN INFARCTION							
45-54	11	9	.549	.604	.512	.222	.423	.231	.652	-.513	.267	---
55-64	21	21	.879	.768	.079	.092	.050	.220	.295	-.054	.583	.582
65-74	7	12	.585	.582	-.081	.365	---	.336	.553	-.569	-.199	.630
Average												
Mean			.749	.685	.328	.207	.281	.254	.431	-.197	.460	.595
Standard error			.113	.102	.114	.118	.123	.100	.155	.195	.088	.085
					INTERMITTENT CLAUDICATION							
45-54	20	6	.215	.696	.345	.347	.340	---	.377	.446	.198	.335
55-64	46	23	.339	.469	.343	.313	.392	.452	.524	.166	.200	.416
65-74	15	12	-.300	.526	-.143	.055	-.103	.332	.037	.395	.131	.457
Average												
Mean			.238	.550	.283	.309	.349	.423	.401	.301	.190	.400
Standard error			.099	.112	.092	.092	.073	.095	.111	.121	.076	.077

TABLE 2. Standardized multivariate regression coefficients of various characteristics for Coronary Heart Disease, Atherothrombotic Brain Infarction, and Intermittent Claudication by sex and age: Framingham Study, 16-year followup.

	Number of cases		Systolic Blood Pressure		Serum Cholesterol		Glucose Intolerance		Cigarettes		LVH-ECG	
Age	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
					CORONARY HEART DISEASE							
45-54	108	35	.239	.325	.343	.204	.190	.202	.370	.238	.085	.027
55-64	165	105	.306	.462	.152	.222	.058	.041	.225	.004	.229	.125
65-74	47	44	.150	.335	.070	.515	.297	-.166	.066	-.244	.151	.359
Average												
Mean			.264	.408	.226	.267	.153	.074	.246	.032	.173	.161
Standard error			.053	.065	.050	.059	.046	.060	.057	.079	.044	.055
					ATHEROTHROMBOTIC BRAIN INFARCTION							
45-54	11	9	.423	.573	.457	.147	.372	.176	.679	-.394	.062	---
55-64	21	21	.715	.486	.028	.123	-.027	.084	.471	.001	.421	.418
65-74	7	11	.827	.240	-.016	.368	---	.040	.599	.545	-.514	.495
Average												
Mean			.657	.479	.278	.187	.222	.105	.546	-.004	.284	.439
Standard error			.130	.112	.120	.121	.127	.109	.161	.195	.106	.103
					INTERMITTENT CLAUDICATION							
45-54	20	5	.105	.540	.303	.404	.323	---	.362	.731	.118	.242
55-64	45	21	.318	.247	.314	.286	.410	.442	.618	.270	.016	.223
65-74	15	12	-.412	.420	-.103	.113	-.115	.232	.016	.462	.231	.304
Average												
Mean			.178	.356	.259	.334	.351	.390	.451	.405	.080	.247
Standard error			.107	.136	.092	.096	.075	.101	.115	.126	.087	.097

THE MAJOR FACTORS

The key factors considered in this report are these: blood pressure, serum cholesterol, glucose intolerance, cigarette smoking and left ventricular hypertrophy on the electrocardiogram. These characteristics are defined in Section 26. Age-specific univariate and multivariate β's, standardized and unstandardized, and their averages are given in Tables 1-4. Tables of relative average odds at various levels of these variables are given in Appendix A.

Blood pressure

In multivariate analysis, where blood pressure is considered as a control variable or as a contributor to multiple regression, both systolic and diastolic pressures may be used. However, when blood pressure is considered by itself it is awkward to use the joint multivariate regression coefficients for systolic and diastolic pressures. Hence in Tables 2 and 4 attention is restricted to the blood pressure coefficients for systolic pressure displayed in Appendix A, which is based on a multivariate analysis that excludes diastolic pressure from the set of variables.

In the balance blood pressure appears to be the strongest of the factors considered for CHD and ABI. For either clinical event there appears to be little difference in the strength of this factor from one age group to another. The relationship between blood pressure and ABI is particularly strong. In the univariate case it can be shown from the average standardized β's in Table 1 that the odds of developing

ABI at a systolic pressure two standard deviations above the average are about four times what they are at the average pressure. In the multivariate case, holding other variables constant, the relative odds for ABI at this level of blood pressure are somewhat reduced, but are still impressive. Blood pressure is also an important factor in IC but not the most important one.

Serum cholesterol

Serum cholesterol is another important factor related to the incidence of the major atherosclerotic events. In terms of the average standardized β's (Tables 1 and 2) it can be said that serum cholesterol is of about equal importance as a risk factor for each of the three atherosclerotic events. However, the relationship of serum cholesterol to these atherosclerotic events appears to vary with age and sex and in this detail the comparisons between the events become much more diffuse on the information available in this study. Basically the primary evidence of a relationship between serum cholesterol and atherosclerosis is derived from data for the age groups under 55 years, where there are few cases of ABI and IC in the study. We will return to this question further along.

Cholesterol appears to make a significant contribution to risk independent of the other variables. As with blood pressure and glucose intolerance allowance for coexisting characteristics slightly reduces the strength of the apparent relationship between serum cholesterol and the three atherosclerotic events, but the relationships that emerge are quite similar to those shown by univariate analysis. Experimental, clinical and pathologic evidence has led to the conclusion that serum cholesterol and blood pressure are basic to the atherosclerotic process.

Glucose intolerance

"Glucose intolerance" designates a composite characteristic which includes clinical diabetes and something that might be designated as preclinical diabetes. Specifically, preclinical diabetes is defined by the presence at the time of the routine biennial examination of a trace or more of sugar in the urine or a casual blood sugar of 120 mg% or greater. A standardized glucose tolerance test was not administered early in the Study, so that assessment of "preclinical diabetes" is less than optimal; but as may be judged from the data in Section 26, both urine sugar and casual blood sugar bear a distinct relationship to atherosclerotic events. It therefore seems reasonable to concoct this joint index of "glucose intolerance" for analytical purposes without any formal argument justifying the exact form of the index.

Glucose intolerance, while a significant factor for all three atherosclerotic events, is most strikingly related to IC incidence. Only for this atherosclerotic manifestation is it comparable in potency to factors such as blood pressure and serum cholesterol. The regression coefficient is substantially reduced in the multivariate analysis (Tables 1 and 2) suggesting little unique effect unexplained by its association with the other contributory factors. In this instance, the multivariate analysis may be concealing a biologically significant role of glucose intolerance since its impact may be mediated through an effect on the other variables, particularly blood pressure.

Cigarette smoking

Cigarette smoking is presented on a collapsed scale in order to accommodate variations in the form of the history and coding from one examination to another. The scale is: no cigarettes, fewer than 20 cigarettes per day, 20 cigarettes per day, and more than 20 cigarettes per day. These levels are assigned values of 0, 1, 2, and 3, respectively, in computing the logistic for cigarette smoking. It would be pure happenstance if this rough scale corresponded precisely to the actual scale of risk for each event for each age-sex group. There is unfortunately insufficient information available to improve this scale. We must, therefore, regard the logistic fit to cigarette smoking as non-optimum although in a rough sort of way it seems to work.

In this form of analysis cigarette smoking appears as one of the important risk factors among men for all three atherosclerotic events. For women it is important only as a factor related to IC. The data for CHD in women is complicated by the fact that cigarette smoking, both in men and women, bears little relation to angina pectoris alone. It may also be complicated by the fact that a high proportion of women who smoke do not inhale and the fact that few women are heavy smokers. For CHD other than angina there is a strong relation to cigarette smoking for both younger men and women.

Of all the key factors this is the only one whose relative role is enhanced in multivariate analysis, that is, when the other risk factors are considered at the same time. The primary reason for this is that there is a negative correlation between blood pressure and cigarette smoking, that is, smokers tend to have lower blood pressure than non-smokers. This is probably secondary to the fact that smokers weigh less than non-smokers. From a biological point of view it is conceivable that the presence of other atherosclerotic factors is a precondition for cigarette smoking to affect atherosclerotic outcomes but there is nothing in the statistical analysis bearing on this question.

LVH-ECG

In the Framingham cohort LVH-ECG has proved a clinical manifestation of exceedingly grave prognosis with an especially high mortality from cardiovascular causes. It is highly correlated with elevated blood pressure, relatively few persons with definite evidence of this finding having systolic pressures below 140 mm Hg. This being the case one would anticipate that it would show relationships similar to those exhibited by blood pressure. It is therefore not surprising that taken by itself it is a variable which has an especially strong association with the incidence of ABI and a strong but lesser

TABLE 3. Unstandardized univariate regression coefficients of various characteristics for Coronary Heart Disease, Atherothrombotic Brain Infarction, and Intermittent Claudication by sex and age: Framingham Study, 16-year followup.

Age	Number of cases		Systolic Blood Pressure		Serum Cholesterol		Glucose Intolerance		Cigarettes		LVH-ECG	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
					CORONARY HEART DISEASE							
45-54	114	43	.015	.017	.009	.006	.795	1.151	.267	.132	.386	.707
55-64	173	111	.016	.019	.005	.005	.455	.435	.124	-.051	.665	.609
65-74	47	45	.009	.018	.001	.012	.957	-.056	.045	-.398	.370	.795
Average												
Mean			.015	.019	.006	.007	.667	.486	.167	-.013	.560	.684
Standard error			.002	.002	.001	.001	.169	.250	.048	.096	.092	.116
					ATHEROTHROMBOTIC BRAIN INFARCTION							
45-54	11	9	.028	.026	.012	.005	1.837	1.314	.540	-.563	.805	---
55-64	21	21	.037	.029	.002	.002	.185	.919	.259	-.070	1.295	1.410
65-74	7	12	.022	.022	-.002	.008	---	1.156	.554	-.945	-.370	1.245
Average												
Mean			.032	.027	.008	.005	1.087	1.074	.382	-.249	1.104	1.350
Standard error			.005	.004	.003	.003	.502	.420	.138	.249	.208	.193
					INTERMITTENT CLAUDICATION							
45-54	20	6	.011	.030	.008	.008	1.476	---	.312	.490	.598	1.406
55-64	46	23	.014	.018	.009	.007	1.461	1.890	.460	.214	.443	1.007
65-74	15	12	-.011	.020	-.004	.001	-.344	1.141	.038	.656	.245	.903
Average												
Mean			.010	.021	.007	.007	1.333	1.653	.361	.402	.429	1.015
Standard error			.004	.004	.002	.002	.281	.377	.098	.167	.177	.195

TABLE 4. Unstandardized multivariate regression coefficients of various characteristics for Coronary Heart Disease, Atherothrombotic Brain Infarction, and Intermittent Claudication by sex and age: Framingham Study, 16-year followup.

Age	Number of cases		Systolic Blood Pressure		Serum Cholesterol		Glucose Intolerance		Cigarettes		LVH-ECG	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
					CORONARY HEART DISEASE							
45-54	108	35	.012	.014	.008	.004	.825	1.153	.307	.262	.257	.114
55-64	165	105	.013	.017	.004	.005	.214	.173	.197	.006	.508	.302
65-74	47	44	.006	.013	.002	.012	.994	-.570	.066	-.405	.281	.710
Average												
Mean			.011	.016	.006	.006	.589	.233	.220	.062	.420	.435
Standard error			.002	.003	.001	.001	.177	.264	.050	.100	.104	.134
					ATHEROTHROMBOTIC BRAIN INFARCTION							
45-54	11	9	.021	.024	.011	.003	1.616	1.006	.562	-.433	.188	---
55-64	21	21	.030	.018	.001	.003	-.101	.349	.413	.002	.934	1.013
65-74	7	11	.032	.009	---	.008	---	.136	.601	.906	-.958	.980
Average												
Mean			.029	.019	.007	.004	.844	.406	.486	-.038	.679	1.001
Standard error			.006	.004	.003	.003	.520	.472	.144	.248	.247	.234
					INTERMITTENT CLAUDICATION							
45-54	20	5	.005	.023	.007	.009	1.402	---	.300	.802	.355	1.013
55-64	45	21	.013	.009	.008	.006	1.526	1.848	.542	.348	.035	.540
65-74	15	12	-.016	.016	-.003	.003	-.385	.797	.016	.767	.430	.602
Average												
Mean			.007	.014	.006	.007	1.347	1.503	.405	.554	.186	.609
Standard error			.005	.005	.002	.002	.291	.401	.101	.174	.201	.243

association with CHD and IC. However, even when allowance is made for blood pressure and other associated variables it remains a strong independent risk factor for both ABI and CHD. It is not as strongly related to IC.

VARIATION OF RISK RELATIONSHIPS BY AGE AND SEX

For all three of the major atherosclerotic events the incidence increases with age. In women this seems to cover the entire age span to age 75. In men there appears to be a levelling off of CHD and ABI incidence after age 60 leading to a decreasing incidence at older ages. Under age 45 there were relatively few events, CHD being the only end point with an incidence at age 35-44 sufficient to study in the Framingham cohort, and then only for men. Tables 5-9 give actual and smoothed two-year incidence rates by age and sex for the major atherosclerotic end points. The smoothed rates by age and sex are pictured in Figures 1-4.

Given the small number of cases available for the various end points and the consequently large sampling variability in age-sex specific estimates, statements with respect to age differentials in the data must be viewed with great caution. In general terms, serum cholesterol appears to bear a relationship to risk which is strongest at young ages and decreases with age (Appendix A). This is clearest for CHD in men, where the association is very strong at age 35-44 and then decreases to the point that at age 65-74 no relationship is found. For men, a similar trend can be read into the data relating

TABLE 5. Average two-year incidence rates per 1,000 for Coronary Heart Disease by age and sex: Framingham Study, 16-year followup.

	Men		Women	
Age	Actual	Fitted[1]	Actual	Fitted[2]
35-39	4.6	4.6	0.0	0.2
40-44	10.2	8.6	2.0	1.7
45-49	14.1	17.1	3.9	4.7
50-54	23.9	27.6	7.2	9.2
55-59	41.6	37.4	13.1	14.9
60-64	42.3	43.9	28.3	21.8
65-69	41.0	44.4	23.5	29.6
70-74	38.6	36.4	31.2	38.3

TABLE 6. Average two-year incidence rates per 1,000 for Angina Pectoris Uncomplicated by age and sex: Framingham Study, 16-year followup.

	Men		Women	
Age	Actual	Fitted[3]	Actual	Fitted[4]
35-39	0.6	0.8	0.0	0.2
40-44	2.2	1.9	1.4	0.9
45-49	5.0	5.3	2.0	2.9
50-54	5.9	9.4	4.0	5.6
55-59	16.2	12.9	9.1	8.8
60-64	13.3	14.2	15.0	12.1
65-69	13.7	11.9	12.9	15.1
70-74	3.5	4.6	13.4	17.6

TABLE 7. Average two-year incidence rates per 1,000 for Coronary Heart Disease other than Angina Pectoris by age and sex: Framingham Study, 16-year followup.

	Men		Women	
Age	Actual	Fitted[5]	Actual	Fitted[6]
35-39	4.0	3.9	0.0	0.1
40-44	8.0	6.7	0.6	0.7
45-49	9.1	11.9	2.0	1.8
50-54	18.0	18.3	3.2	3.5
55-59	25.4	24.6	4.0	6.1
60-64	29.0	29.5	13.3	9.7
65-69	27.3	31.9	10.6	14.3
70-74	35.1	30.3	17.8	20.3

The equations for fitting average two-year incidence (y) by weighted regression are:

1 $y = .386333 - .025442 \times \text{age} + .053846(\text{age}^2/100) - .035049(\text{age}^3/10{,}000)$

2 $y = .054189 - .003289 \times \text{age} + .005675(\text{age}^2/100) - .001988(\text{age}^3/10{,}000)$

3 $y = .211229 - .013859 \times \text{age} + .029290(\text{age}^2/100) - .019456(\text{age}^3/10{,}000)$

4 $y = .065446 - .004151 \times \text{age} + .008152(\text{age}^2/100) - .004602(\text{age}^3/10{,}000)$

5 $y = .189111 - .012483 \times \text{age} + .026461(\text{age}^2/100) - .016917(\text{age}^3/10{,}000)$

6 $y = -.001759 + .000298 \times \text{age} - .001382(\text{age}^2/100) + .001917(\text{age}^3/10{,}000)$

The age used for the fitting is at the midpoint of the interval.

TABLE 8. Average two-year incidence rates per 1,000 for Atherothrombotic Brain Infarction by age and sex: Framingham Study, 16-year followup.

	Men		Women	
Age	Actual	Fitted[7]	Actual	Fitted[8]
35-39	0.0	*	0.0	0.0
40-44	0.0	*	0.0	0.1
45-49	0.3	1.0	0.7	0.7
50-54	3.3	2.7	1.6	1.7
55-59	4.3	4.5	2.7	3.0
60-64	5.1	5.4	4.7	4.5
65-69	5.7	5.1	7.0	6.0
70-74	2.8	2.6	4.1	7.5

TABLE 9. Average two-year incidence rates per 1,000 for Intermittent Claudication by age and sex: Framingham Study, 16-year followup.

	Men		Women	
Age	Actual	Fitted[9]	Actual	Fitted[10]
35-39	0.6	0.7	0.5	0.3
40-44	0.7	1.0	0.3	0.2
45-49	3.4	2.5	0.2	0.6
50-54	3.0	5.0	1.3	1.5
55-59	8.9	8.0	2.9	2.9
60-64	12.1	11.0	5.1	4.7
65-69	9.0	13.7	6.3	6.9
70-74	18.2	15.6	6.1	9.4

The equations for fitting average two-year incidence (y) by weighted regression are:

7 $y = .107454 - .006786 \times \text{age} + .013750(\text{age}^2/100) - .008806(\text{age}^3/10{,}000)$

8 $y = .028702 - .001709 \times \text{age} + .003123(\text{age}^2/100) - .001613(\text{age}^3/10{,}000)$

9 $y = .082007 - .005014 \times \text{age} + .009658(\text{age}^2/100) - .005524(\text{age}^3/10{,}000)$

10 $y = .025158 - .001325 \times \text{age} + .002023(\text{age}^2/100) - .000682(\text{age}^3/10{,}000)$

The age used for the fitting is at the midpoint of the interval.

Fig I

FITTED PROBABILITY OF DEVELOPING SPECIFIED DISEASE IN 2 YEARS MEN, THE FRAMINGHAM STUDY, 16 YEARS FOLLOW-UP

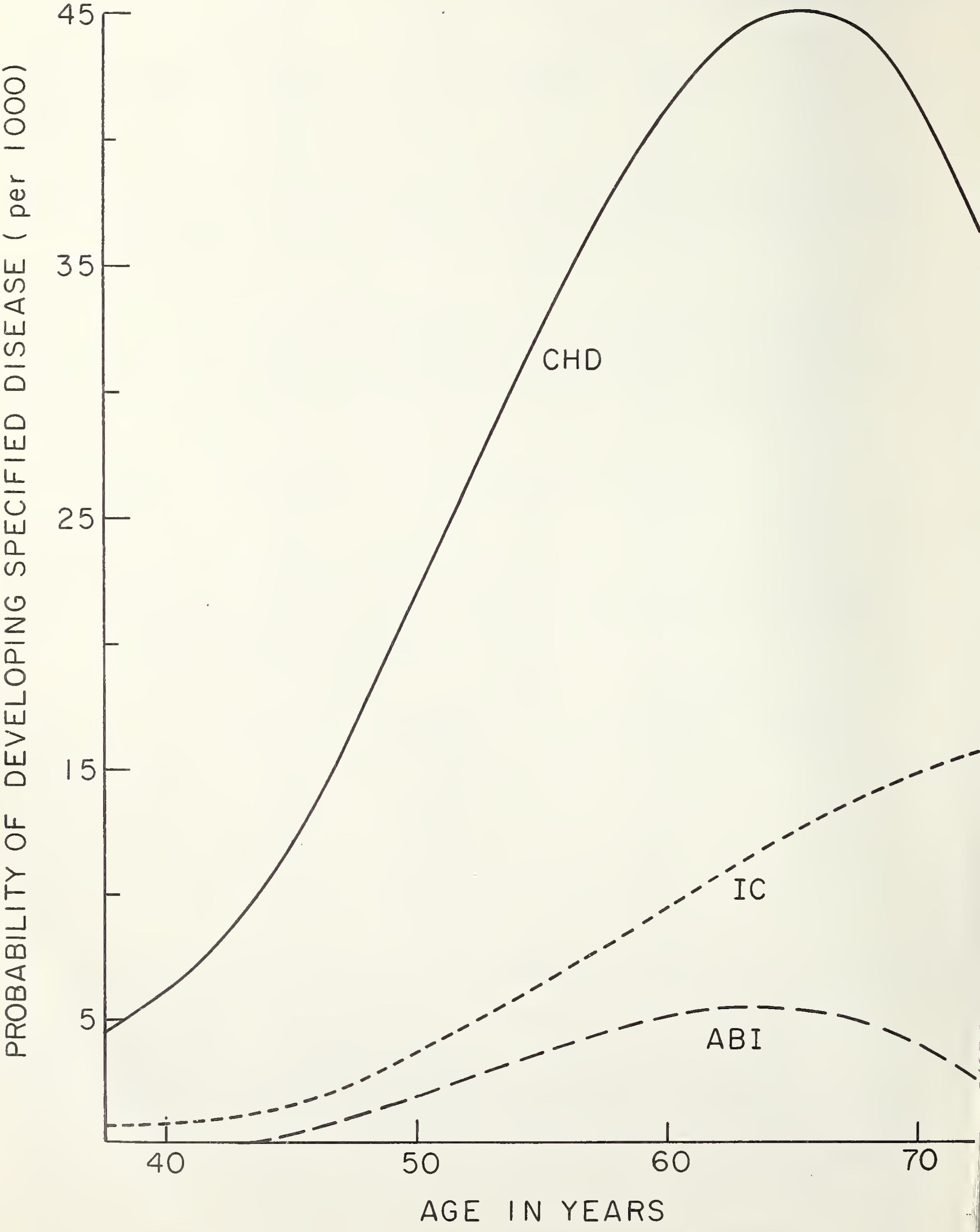


Fig 2

FITTED PROBABILITY OF DEVELOPING SPECIFIED DISEASE IN 2 YEARS
WOMEN, THE FRAMINGHAM STUDY, 16 YEARS FOLLOW-UP

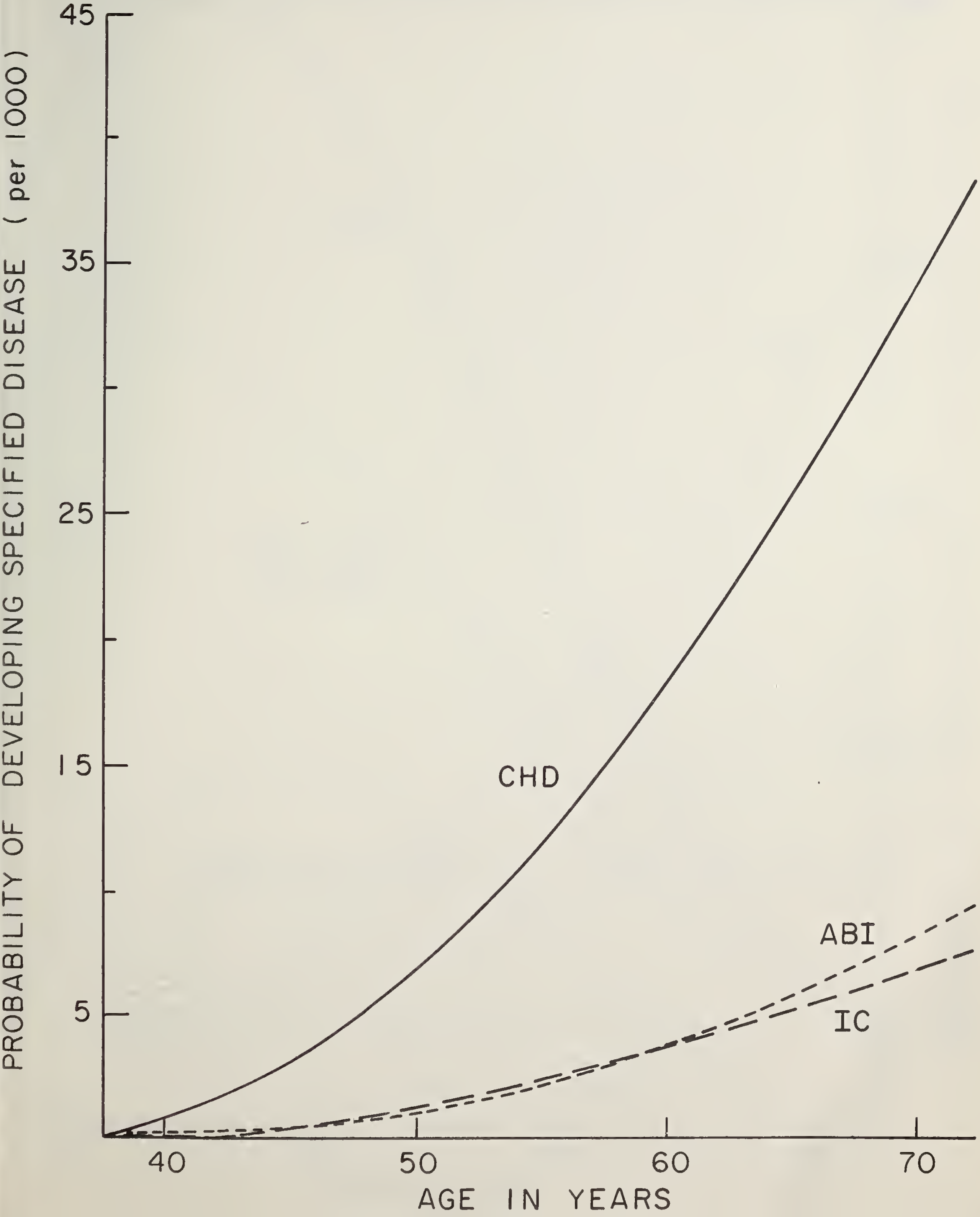


Fig 3

FITTED PROBABILITY OF DEVELOPING SPECIFIED DISEASE IN 2 YEARS
MEN, THE FRAMINGHAM STUDY 16 YEARS FOLLOW-UP

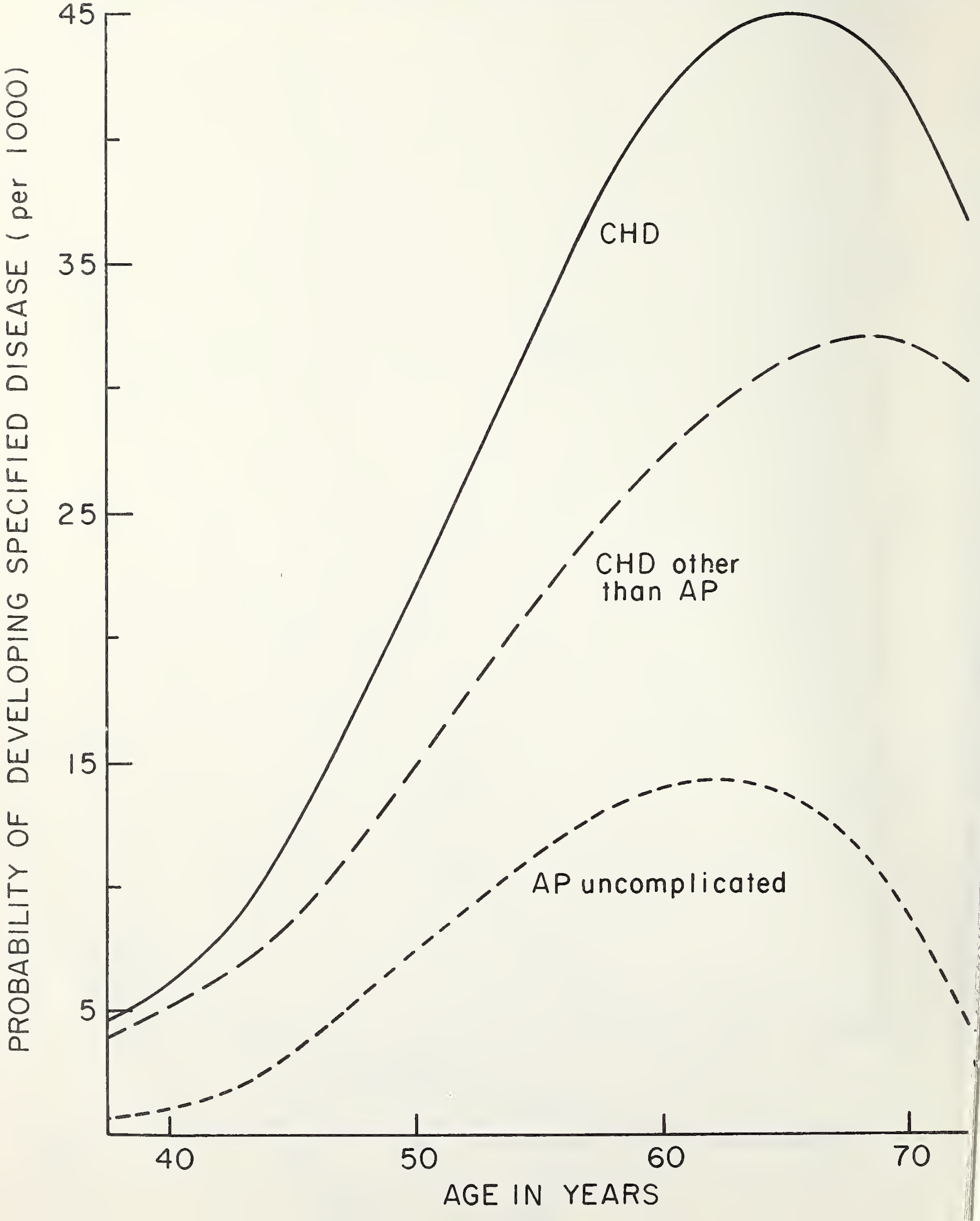
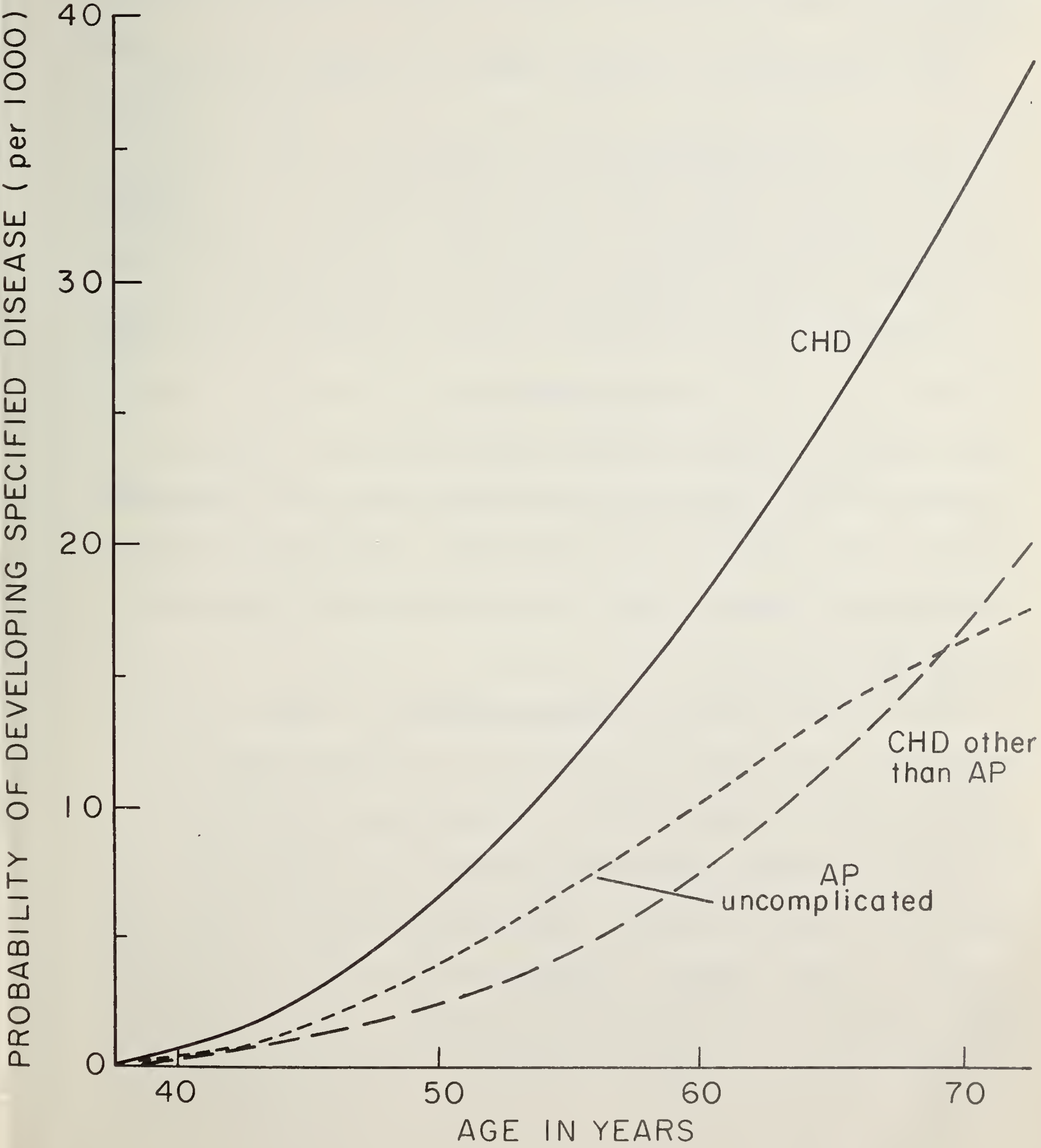


Fig 4

FITTED PROBABILITY OF DEVELOPING SPECIFIED DISEASE IN 2 YEARS
WOMEN, THE FRAMINGHAM STUDY, 16 YEARS FOLLOW-UP



to ABI and IC but because of the relatively small incidence in these diseases the age differentials are not as certain. For women it is not clear that there is a similar age trend and we must regard the question as moot.

The age differentials for CHD in women are somewhat perplexing. Only 7 cases of CHD occurred to women before age 45 (Appendix A) but their regression on serum cholesterol is very strong. This is suggestive of an age trend parallel to that for men. At the other end of the age scale, however, the relationships are quite dissimilar for the two sexes. There is no regression of CHD on serum cholesterol for men aged 65-74 but for women the regression is, if anything, stronger at that age than at 45-54 or 55-64. Earlier data in fact had led to the conclusion that there was an association between serum cholesterol and CHD in young women but not in older women. The moral is that on the limited data available great caution should be exercised in discussing age differentials.

The risk associated with cigarette smoking also seems to have an age gradient in some cases. For CHD in men the standardized β's for cigarette smoking are very similar, age for age, to those for serum cholesterol, following a practically identical trend by age (See Appendix A). The standardized β's for CHD other than AP in women also decrease with age, cigarette smoking carrying a strong excess risk of CHD at age 45-54 and no excess risk at age 65-74. (Angina has little discernible relation to cigarette smoking in either sex.) It is difficult to be sure that there are any age differentials in the relation of cigarette smoking to ABI or IC in either men or women. For women the multivariate analysis suggests that cigarette smoking has no relationship at all to ABI at any age. Again the paucity of information about these age differentials (or lack of them) should be kept clearly in mind.

There is no clear suggestion of age differentials in the risk associated with the other variables. Thus, so far as can be judged from the data, blood pressure, glucose intolerance, and LVH-ECG are generally as strong risk factors at age 65-74 as at younger ages.

SEX DIFFERENTIALS

In terms of the average standardized univariate β's each of these risk factors, except for cigarette smoking, appears to be at least as strongly related to CHD in women as in men. The exception for cigarette smoking, as already noted, is a function of the different proportion of CHD appearing as AP uncomplicated. In multivariate analysis there is a suggestion that glucose intolerance may not make a contribution independent of blood pressure to CHD in women. However, in this case the average standardized β for men is statistically significant and the difference between the average standardized β for men and women is not statistically significant, so that the question of a sex differential in this relationship must be regarded as moot. In fact some other analyses of these data have suggested a stronger association for women than men.

For IC the association with these various factors also appears to be generally as strong for women as for men and for systolic blood pressure the relationship may be stronger in women, the difference approaching statistical significance at a 5% level.

The relationship of ABI to blood pressure, serum cholesterol and LVH-ECG is similar in the two sexes. Cigarette smoking, on the other hand, has a strong relationship to ABI in men but is not related to ABI in women; while there is a suggestion in the multivariate analysis that glucose intolerance is related to ABI in men but not in women--a suggestion subject to the same caveats as those just stated for CHD.

VARIATION BY ATHEROSCLEROTIC EVENT

While the set of variables is important for each of the atherosclerotic events their importance varies somewhat from one event to the other.

In terms of the average multivariate β's, blood pressure and LVH-ECG are more strongly related to ABI than to CHD or IC. Blood pressure seems as strongly associated with IC as CHD, except for men 65-74. Glucose intolerance is a particularly strong risk factor for IC. It is less strongly related to ABI or CHD. Serum cholesterol appears to be equally important for all three events, although as previously noted, the age differentials in this relationship are important considerations in assessing the significance of this finding.

The picture for cigarette smoking is somewhat complicated. For men it is the strongest of the risk factors for IC. At an absolute level it is an equally strong risk factor for ABI in men and is also a strong risk factor for CHD in men. For women it is strongly related to IC but is not related to ABI.

Up to this point the comparisons seems straightforward. However, for CHD they are not and it becomes necessary to consider separately the two major CHD categories--Angina pectoris uncomplicated (APU) and CHD other than angina pectoris. The designation angina pectoris uncomplicated refers to angina occurring in a person free of CHD at the beginning of an exam interval and unaccompanied by any other manifestation of CHD within that two-year interval. All other CHD is lumped into the other class, which could be designated as a "coronary attack." It includes myocardial infarction, coronary insufficiency and sudden or non-sudden CHD death without a documented MI.

As may be judged from the odds tables in Appendix A, the key characteristics appear to bear the same relationship to either of these broad categories of CHD with one conspicuous exception. This is cigarette smoking, which both in men and women bears little or no relationship to APU but is strongly related to CHD other than AP.

In interpreting comparisons between atherosclerotic events the differentials in incidence by age should be kept in mind. For example, both ABI and IC rarely occur under age 45 and the large bulk of the ABI and IC cases at Framingham are for persons over age 55. At older ages serum cholesterol is a relatively weak factor for CHD. To say that it is equally as strong a factor for ABI and IC at these ages is equivalent to saying that it is equally as weak. On the other hand, the implications for the natural history of these diseases is something different, for the data clearly suggest that elevation of serum cholesterol is part of the background of all these atherosclerotic diseases. Whether it is important enough a precondition for IC and ABI to warrant attention on the grounds of preventing these two diseases, is, of course, a vastly different question and is not considered in this report.

Another way of considering the distinction between different forms of cardiovascular disease is to ask whether antecedent factors discriminate between them. This approach leaves out any reference to the population at risk but if the results are considered in the light of the more conventional analyses it may suggest some of the distinction in antecedent factors. We have considered three contrasts this way: (1) myocardial infarction (MI) versus APU; (2) Death versus survival following CHD; and (3) ABI versus other CVA. (Appendix D).

The discriminant functions (by the method of R.A. Fisher) use as discriminators the five used elsewhere--systolic blood pressure (SBP), serum cholesterol (CHOLSTRL), number of cigarettes smoked per day (CIGARTS), left ventricular hypertrophy by electrocardiogram (LVH-ECG), and glucose intolerance (GLUCOSE). The characteristics are redefined at each examination or (if missing at that exam) the first one at which it was available.

As discriminators this set of variables is not very impressive, whether the contrast is MI vs. APU, CHD death vs. initial survival from CHD or ABI vs. other forms of stroke. Under age 65 men or women who smoke more cigarettes are more likely to manifest MI than APU. This was already evident from our previous analysis. Men who have LVH-ECG are more likely to die of CHD (in the same interval CHD initally appears) than survive it; while for women, glucose intolerance seems to militate against CHD survival. (It is difficult to see why these relationships should be sex-specific.) Stroke seems more likely to take the form of ABI than other CVA in the presence of elevated serum cholesterol, consistent with the purported etiological distinctions.

OTHER CHARACTERISTICS

The question can be asked whether any other characteristics are related to the development of CHD, ABI and IC than those we have considered. Obviously we chose to focus on the five variables of blood pressure, serum cholesterol, cigarette smoking, LVH-ECG and glucose intolerance because among the characteristics repeatedly assessed in the Framingham Study we have found these to be important factors relative to all three major atherosclerotic events. However, other factors warrant discussion and we will briefly consider some of these.

One method of assessing the contribution of other variables is to perform a multivariate analysis which includes as independent variables the key variables already considered (systolic blood pressure, diastolic blood pressure, serum cholesterol, left ventricular hypertrophy by electrocardiogram, cigarette smoking and glucose intolerance) and a seventh variable which would be the characteristic under consideration. If there is a significant increase in discrimination by the addition of the seventh variable then that variable could be considered to be significantly related to the incidence of the given disease. If there is no significant increase in discrimination this may mean that the additional variable is unrelated to the incidence of the disease or it may mean that its relationship is intermediated by the "key variables." A test for the increase in discrimination is to divide the discriminant coefficient of the additional variable by its standard error and if this quotient (t-value) is greater than two in absolute value it is considered significant. Discriminant analysis is used here, rather than the method of Duncan-Walker, which is used elsewhere in this report, in order to reduce computation costs. Discriminant functions based on the six key variables are given in Appendix C for the following events: coronary heart disease, angina pectoris uncomplicated, coronary heart disease other than angina pectoris, intermittent claudication and atherothrombotic brain infarction.

Tables 10-14 present the t-values for the five events and eight additional characteristics. These t-values were averaged over the age groups by computing $\Sigma(\beta_i/V_i)/\Sigma(1/V_i)$ where β_i is the discriminant coefficient for the specified characteristic in the ith age group and V_i is the variance of β_i.

The variables considered are among those measured on repeated examinations. These include hemoglobin, phospholipid, uric acid, Framingham relative weight, vital capacity, urine albumin, heart enlargement, and non-specific T-wave abnormality. These variables are defined in Section 26 where age-sex-specific univariate coefficients are presented. The clinical end points are the five already considered.

Tables 15 and 16 give average univariate regressions derived from Section 26. These include all the characteristics and all the end points considered in Section 26. We will focus on the subset considered in this section, beginning with the regressions for total CHD, CHD other than AP, and APU.

A substantial proportion of the univariate regressions for CHD on the eight additional characteristics are statistically significant and appear to be the same for CHD other than AP and APU. In the multivariate analysis (Tables 10-14) these univariate regressions for CHD are weakened substantially. It is difficult to sort out what is and what is not meaningful. The only variable with a statistically significant regression for both men and women is heart enlargement. This appears to be a significant additional factor for CHD other than AP, but not for APU. In women diminished vital capacity is significant for both major categories of CHD. Relative weight also appears to make a significant additional contribution to the risk of CHD--at least in men.

While it has always been evident in the Framingham data that

TABLE 10. T-values for additional contribution to discrimination of Coronary Heart Disease for specified characteristics by sex and age: Framingham Study, 16-year followup.

	MEN				WOMEN			
Characteristic	45-54	55-64	65-74	Average	45-54	55-64	65-74	Average
Hemoglobin	0.30	-0.48	0.76	0.09	0.73	1.09	0.17	1.22
Phospholipid	0.75	-0.81	-0.30	-0.22	-1.68	0.67	0.84	0.08
Uric Acid	0.78	1.07	1.81	1.89	0.74	1.49	-2.31	0.33
Framingham Relative Weight	1.03	2.37	0.46	2.46	0.40	0.67	-0.45	0.44
Vital Capacity	-1.59	0.19	-0.54	-0.99	-2.56	-1.87	-1.64	-3.34
Albumin in Urine	1.97	-1.71	0.22	-0.44	2.25	0.65	2.24	2.62
Heart Enlargement	2.10	0.99	-0.26	1.66	0.69	2.06	0.56	2.11
Non-specific T-wave	-0.64	0.15	2.12	0.73	0.53	-0.42	2.56	1.30
Number of Non-Cases	5492	3756	1093		7091	5257	1671	
Number of Cases	102	163	44		34	105	44	

TABLE 11. T-values for additional contribution to discrimination of Angina Pectoris Uncomplicated for specified characteristics by sex and age: Framingham Study, 16-year followup.

	MEN				WOMEN			
Characteristic	45-54	55-64	65-74	Average	45-54	55-64	65-74	Average
Hemoglobin	0.62	0.43	-0.13	0.61	0.37	2.18	-0.47	1.59
Phospholipid	-0.17	-1.10	-0.52	-1.10	-1.21	-0.04	-0.26	-0.67
Uric Acid	0.90	1.21	-0.41	1.28	1.43	0.68	-1.89	0.22
Framingham Relative Weight	0.74	1.67	0.32	1.78	0.17	1.47	0.12	1.25
Vital Capacity	-1.44	-0.09	-0.85	-1.13	-2.08	-1.02	-0.66	-2.00
Albumin in Urine	0.54	-1.42	-0.55	-1.21	3.91	1.22	-0.27	2.48
Heart Enlargement	0.29	-0.51	-0.82	-0.61	-0.48	0.42	0.87	0.63
Non-specific T-wave	-1.20	1.97	0.38	1.17	-1.23	-1.18	1.41	-0.54
Number of Non-Cases	5567	3861	1125		7107	5302	1692	
Number of Cases	27	58	12		18	60	23	

TABLE 12. T-values for additional contribution to discrimination of Coronary Heart Disease other than Angina Pectoris for specified characteristics by age and sex: Framingham Study, 16-year followup.

	MEN				WOMEN			
Characteristic	45-54	55-64	65-74	Average	45-54	55-64	65-74	Average
Hemoglobin	-0.03	-0.92	0.98	-0.31	0.67	-0.86	0.74	0.06
Phospholipid	0.97	-0.16	-0.03	0.50	-1.17	1.06	1.47	0.85
Uric Acid	0.36	0.41	2.40	1.40	-0.44	1.47	-1.30	0.26
Framingham Relative Weight	0.74	1.67	0.34	1.73	0.40	-0.67	-0.77	-0.73
Vital Capacity	-0.97	0.31	-0.10	-0.41	-1.52	-1.65	-1.64	-2.73
Albumin in Urine	1.96	-1.04	0.60	0.32	-0.87	-0.42	3.50	1.13
Heart Enlargement	2.26	1.61	0.21	2.43	1.51	2.62	-0.12	2.42
Non-specific T-wave	-0.02	-1.31	2.27	0.08	2.08	0.73	2.17	2.51
Number of Non-Cases	5519	3814	1105		7109	5317	1694	
Number of Cases	75	105	32		16	45	21	

TABLE 13. T-values for additional contribution to discrimination of Atherothrombotic Brain Infarction for specified characteristics by sex and age: Framingham Study, 16-year followup.

	MEN				WOMEN			
Characteristic	45-54	55-64	65-74	Average	45-54	55-64	65-74	Average
Hemoglobin	0.65	1.57	-0.07	1.48	0.56	0.63	0.15	0.78
Phospholipid	0.77	0.61	-0.24	0.82	-0.46	0.45	-1.77	-0.57
Uric Acid	-0.30	0.13	0.89	0.30	2.17	-0.28	-0.42	0.46
Framingham Relative Weight	-0.34	0.44	0.46	0.33	2.52	0.87	0.80	2.10
Vital Capacity	-0.97	0.29	-0.36	-0.46	-1.39	0.14	1.65	0.36
Albumin in Urine	-0.84	0.07	4.28	2.05	1.24	-1.48	0.08	-0.49
Heart Enlargement	0.50	-0.34	1.46	0.69	-1.48	0.83	1.60	1.06
Non-specific T-wave	1.21	0.01	-1.03	0.02	1.58	0.04	1.58	1.51
Number of Non-Cases	5803	4279	1362		7186	5579	1856	
Number of Cases	11	21	7		7	21	11	

TABLE 14. T-values for additional contribution to discrimination of Intermittent Claudication for specified characteristics by sex and age: Framingham Study, 16-year followup.

	MEN				WOMEN			
Characteristic	45-54	55-64	65-74	Average	45-54	55-64	65-74	Average
Hemoglobin	-0.01	0.65	0.09	0.53	0.34	-0.40	0.39	0.06
Phospholipid	-1.19	0.28	-0.36	-0.56	-0.41	0.93	-1.31	0.03
Uric Acid	-0.13	-0.41	0.44	-0.19	2.12	-0.17	-0.17	0.52
Framingham Relative Weight	-2.96	-0.52	-0.61	-2.15	1.08	-1.01	-0.23	-0.51
Vital Capacity	-0.35	-1.99	-1.28	-2.21	-1.28	-0.35	-0.95	-1.26
Albumin in Urine	0.97	-1.39	-0.35	-0.95	1.81	0.53	-1.51	0.16
Heart Enlargement	0.45	-0.08	-0.44	-0.09	0.34	-0.61	1.29	0.44
Non-specific T-wave	3.80	3.07	-0.44	3.69	-1.09	2.31	0.43	1.64
Number of Non-Cases	5776	4226	1279		7206	5596	1859	
Number of Cases	20	45	15		5	21	12	

relative weight considered in a univariate fashion is associated with at least some manifestations of atherosclerotic disease, its net contribution to these events has been difficult to estimate. Nonetheless a greater relative weight is clearly a factor in blood pressure and serum lipid elevation and in glucose intolerance so that under any circumstances it may be considered an underlying factor in atherosclerotic disease. From that viewpoint the multivariate analysis may be irrelevant.

But there is another consideration in multivariate analysis which is sometimes overlooked and which is illustrated by these data. The multivariate β for relative weight is substantially different depending on the set of variables included in the analysis. If cigarette smoking is included in the set of variables we come to one conclusion, if it is excluded we come to another conclusion. For CHD in men the t-values for the additional contribution of relative weight to discrimination are as follows:

	Cigarette Smoking	
	Included	Excluded
45-54 years	1.025	0.596
55-64 years	2.372	1.866
65-74 years	0.459	0.381

Any multivariate analysis must always be evaluated in the context of the set of variables considered.

For ABI all the suggestions of association with this set of

TABLE 15. Average standardized regression coefficient by characteristic and event for MEN aged 45-74: Framingham Study, 16-year followup.

Characteristic	CHD	CHD EXCEPT AP	MI	APU	CHDD S	CHDD SU	CHDD NS	CVA	ABI	IC	CHF	DEATH	CHDD	OTHER CVD
SBP	.340	.363	.267	.288	.399	.382	.554	.587	.749	.238	.648	.309	.370	.465
DBP	.271	.281	.173	.242	.269*	.278*	.512	.552	.747	-.115*	.466	.214	.283	.196*
CHOL	.257	.250	.236	.267	.331	.343	.323	.146*	.328	.283	.110*	-.122	.176	-.309
HEMGLBN	.089*	.071*	.103*	.121*	-.174*	-.160*	.194*	.303	.437	.129*	-.111*	-.117	-.026*	-.035*
PHOS	.179	.214	.161	.117*	.330	.358	.298*	.186*	.340	.179*	.259	-.053*	.151*	-.232*
BL SG	.125	.122	.179	-.107*	.065*	.079*	.326	.167	.217	.252	.242	.126	.217	.187
UR ACID	.138	.122*	.142*	.165*	.049*	.071*	.155*	.008*	.171*	-.060*	.221	-.062*	.078*	-.072*
FRW	203	.194	.144*	.207	.312	.295*	.041*	.058*	.251*	-.269	.235	-.201	.061*	-.486
VC	-.131	-.131*	-.140*	-.130*	-.101*	-.175*	.160*	-.199*	-.296*	-.371	-.564	-.453	-.221	-.757
ALCHOL	-.030*	-.059*	-.120*	.049*	.041*	.045*	-.236*	.211	.378	.048*	.106*	.060*	-.070*	-.124*
CIGS	.186	.254	.210	.042*	.377	.432	.073*	.334	.431	.401	.070*	.227	.199	.230*
HYP	.345	.368	.305	.280	.385	.390	.505	.635	.860	.268	.783	.279	.351	.427
ALB UR	.074*	.111	.126	-.008*	.084	.082*	.320	.194	.356	.041*	.384	.232	.154	.296
SUG UR	.159	.205	.197	.042*	.253	.265	.371	.152	.215	.302	.185	.122	.213	---
HE	.155	.214	.148	.015*	.384	.311	.224*	.209	.305	.029*	.694	.356	.479	.567
LVH-ECG	.234	.278	.197	.189	.539	.512	.385	.428	.460	.190	.505	.395	.522	.564
NST	.140	.137	.079*	.161	.255	.230*	---	-.013*	.265	.326	.272	.170	.226	.097*
DIAB	.113	.133	.126	.132*	.161*	.175*	.236*	.203	.264	.361	.188	.115	.192	.185*
GL INT	.172	.213	.236	.071*	.145*	.163*	.396	.181	.281	.349	.157*	.118	.180	.247
Standard error-SBP	.048	.057	.070	.084	.134	.140	.136	.087	.113	.099	.085	.046	.070	.099

NOTE: Derived from the univariate age-specific coefficients tabled in Section 26. --- means that a coefficient was available for no more than one age group. * means that the average coefficient was not statistically significant.

TABLE 16. Average standardized regression coefficient by characteristic and event for WOMEN aged 45-74: Framingham Study, 16-year followup.

Characteristic	CHD	CHD EXCEPT AP	MI	APU	CHDD S	CHDD SU	CHDD NS	CVA	ABI	IC	CHF	DEATH	CHDD	OTHER CVD
SBP	.477	.436	.543	.512	.390*	.390*	.529	.555	.685	.550	.688	.250	.368	.581
DBP	.386	.365	.602	.406	.364*	.364*	.544	.478	.717	.491	.611	.154	.268	.403
CHOL	.296	.350	.393	.230	---	---	.842	.084*	.207*	.309	.086*	-.019*	.410	-.036*
HEMGLBN	.186	.136*	.301*	.218	---	---	-.298*	.160*	.299*	.251*	.191*	.073*	.260*	.332
PHOS	.227	.401	.180*	.071*	---	---	.779	-.043*	-.054*	.293	-.008*	-.025*	.403	-.144*
BL SG	.228	.973	.220	.113	---	---	.339	.168	.227	.323	.353	.219	.371	.203
UR ACID	.141	.119*	.171*	.160*	---	---	.398*	.318	.303	.222*	.398	.284	.362	.531
FRW	.185	.041*	.068*	.277	.153*	.153*	-.519*	.242	.480	.123*	.457	-.082*	-.089*	.105*
VC	-.328	-.342	-.270*	-.314	-.738	-.738	-.507	-.269	-.172*	-.390	-.805	-.452	-.541	-.819
ALCHOL	-.002*	.204	.329	-.459	---	---	.281	.230	-.160*	.111*	.010*	-.006*	.132*	.049*
CIGS	-.024*	.228	.279	-.239	.374*	.374*	.076*	-.014*	-.197*	.301	.038*	.127	.046*	.201*
HYP	.484	.396	.642	.546	.324*	.324*	.345*	.528	.797	.540	.726	.184	.330	.557
ALB UR	.169	.253	.345	.202	.303*	.303*	---	.187	.126*	.212*	.224	.169	.117*	.312
SUG UR	.144	.215	.211	.091*	.365	.365	.318	.172	.238	---	.281	.183	.291	.243
HE	.298	.332	.288	.266	.490	.490	.479	.496	.560	.307	.821	.398	.575	.923
LVH-ECG	.262	.255	.184*	.322	---	---	.382	.517	.595	.400	.556	.335	.417	.623
NST	.159	.250	.081*	.111*	.469	.469	.408	.216	.265	.363	.162*	.172	.386	.131*
DIAB	.157	.199	.195	.126*	.411	.411	.248*	.230	.271	.329	.358	.182	.326	.281
GL INT	.124	.196	.170	.066*	.414	.414	.402	.201	.254	.423	.391	.210	.363	.295
Standard error-SBP	.056	.089	.114	.070	.272	.272	.208	.088	.102	.112	.091	.057	.124	.090

NOTE: Derived from the univariate age-specific coefficients tabled in Section 26. --- means that a coefficient was available for no more than one age group. * means that the average coefficient was not statistically significant.

CHARACTERISTICS: SBP = systolic blood pressure; DBP = diastolic blood pressure; CHOL = serum cholesterol; HEMGLBN = hemoglobin; PHOS = phospholipid; BL SG = blood sugar; UR ACID = uric acid; FRW = Framingham relative weight; VC = vital capacity; ALCHOL = alcohol consumed; CIGS = cigarette smoking; HYP = hypertension; ALB UR = albumin in urine; SUG UR = sugar in urine; HE = heart enlargement; LVH-ECG = left ventricular hypertrophy by electrocardiogram; NST = nonspecific T-wave abnormality; DIAB = diabetes; GL INT = glucose intolerance.

EVENTS: CHD = coronary heart disease; CHD EXCEPT AP = coronary heart disease other than angina pectoris; MI = myocardial infarction; APU = angina pectoris uncomplicated; CHDD-S = sudden death from coronary heart disease; CHDD-SU = sudden and unexpected death from coronary heart disease; CHDD-NS = non-sudden death from coronary heart disease; CVA = cerebrovascular accident; ABI = atherothrombotic brain infarction; IC = intermittent claudication; CHF = congestive heart failure; DEATH = death from all causes; CHDD = death from coronary heart disease; OTHER CVD = cardiovascular deaths other than coronary heart disease deaths.

characteristics seen in the univariate analysis pretty well wash out in the multivariate analysis. Two of the average t-values given are statistically significant but the age-specific data are not persuasive that a relationship really is present. For IC, on the other hand, several interesting associations persist in multivariate analysis, among them the suggestion that non-specific T-wave abnormalities are positively associated with incidence while vital capacity is negatively associated. Of interest also is the suggestion of a negative association of Framingham relative weight with IC. (One possibility is that overweight people are less active than lean people and are for that reason less likely to induce the symptoms of IC.)

PREDICTING THE EVENT

The multivariate functions considered analytically in the preceding discussion can be looked at synthetically as devices for predicting the event. This is a particularly attractive use of the data in light of the increasing interest in medical intervention and in clinical trials to measure the efficacy of proposed interventions. But if the data from the Framingham Study is to be used this way, it is desirable to keep several cautions in mind.

The most important of these is the fact that measurements both of risk characteristics and end points vary markedly from one investigator to another. This will certainly have a serious impact on absolute probabilities and it may very well have a substantial effect on relative probabilities. Perhaps next in importance is the fact that the data given in this report refer to a general population. Hence the probabilities given are most pertinent for population screening or for persons appearing for routine medical workups and apply least well to persons appearing in a specialist's office on referral for specific complaints.

Three other cautions should be considered. The first is that the town of Framingham is not the United States, much less the entire world. On the other hand, comparison with other studies in this country have tended to corroborate the Framingham findings. The second is that the size of the sample is such that all the estimates given have large sampling errors attached to them. The third is the fact that formally all the statistics given constitute a graduation or smoothing of the data and none are, strictly speaking, prediction equations. On the other hand, these statistics have been investigated for their predictive ability and there is no question that they have predictive value.

With these considerations in mind we have prepared a set of tables (Appendix A) which give the relative odds for each of the major atherosclerotic events at various levels of the key variables. For screening purposes the univariate odds (smoothed-1) are probably the most useful. For analytical purposes the multivariate odds (smoothed-2) are more helpful. In addition we have prepared for total coronary heart disease a table of absolute probabilities (Appendix B) corresponding to various levels of each key variable and various lengths of followup. The screening effectiveness of the multivariate risk function may be judged from Tables 17-19 and Figure 5. Should the reader prefer, he can regard these tables as indicators of the ability of the multivariate logistic to fit the sample data.

THE EVENT AS A "RISK FACTOR"

The appearance of one atherosclerotic event is followed by an increased probability that another event will appear. Thus, persons with CHD have a greater risk of ABI or IC than persons without CHD. Similarly persons with IC have a greater risk of ABI or CHD than persons without IC. It is less clear that ABI carries an enhanced risk of CHD or IC. In any case, the indicated relative risk of other atherosclerotic events following ABI is not as great. (This may be partly an artifact. Persons with ABI are likely to be too sedentary to elicit the symptoms of IC or AP or they may have difficulty in communicating their symptoms or responding to questions. If they die there is an inclination to attribute this to another stroke. Such factors would tend to understate the incidence of CHD and IC in persons with a stroke.)

One way of analyzing this would be to undertake a multivariate analysis where the original atherosclerotic event is added to the set of risk factors and its net contribution assessed. Another is to use the probabilities defined by the five key variables to calculate an

TABLE 17. Number of persons and percent developing Coronary Heart Disease in each decile of risk by sex and age: Framingham Study, 16-year followup.

		Decile of Risk									
	Total	1	2	3	4	5	6	7	8	9	10
Actual					NUMBER OF CASES						
Men											
45-54	108	0	6	6	3	13	5	12	19	16	28
55-64	165	5	4	14	9	17	16	18	13	25	44
65-74	47	4	3	5	2	4	4	4	5	6	10
Total	320	9	13	25	14	34	25	34	37	47	32
Women											
45-54	35	2	3	2	3	3	3	1	6	5	7
55-64	105	1	4	7	8	4	7	9	13	25	27
65-74	44	1	1	3	3	1	3	3	4	7	18
Total	184	4	8	12	14	8	13	13	23	37	52
Smoothed											
Men											
45-54	108.0	3.2	4.5	5.5	6.6	7.8	9.3	11.0	13.3	17.0	29.8
55-64	165.2	7.4	8.9	10.2	11.3	12.6	14.3	16.2	18.8	23.1	42.4
65-74	47.2	2.9	3.2	3.4	3.6	3.8	4.0	4.3	4.8	6.8	10.4
Total	320.4	13.5	16.6	19.1	21.5	24.2	27.6	31.5	36.9	46.9	82.6
Women											
45-54	34.9	1.5	1.8	2.1	2.3	2.6	2.9	3.3	3.9	4.9	9.6
55-64	104.9	3.9	5.0	5.9	6.7	7.6	8.6	10.0	11.9	15.7	29.6
65-74	44.1	0.8	1.4	1.8	2.2	2.7	3.3	4.1	5.0	6.9	15.9
Total	183.9	6.2	8.2	9.8	11.2	12.9	14.8	17.4	20.8	27.5	55.1
					PERCENT OF CASES						
Men (45-74)											
Actual	100.0	2.8	4.1	7.8	4.4	10.6	7.8	10.6	11.6	14.7	25.6
Smoothed	100.0	4.2	5.2	6.0	6.7	7.6	8.6	9.8	11.5	14.6	25.8
Women (45-74)											
Actual	100.0	2.2	4.3	6.5	7.6	4.3	7.1	7.1	12.5	20.1	28.3
Smoothed	100.1	3.4	4.5	5.3	6.1	7.0	8.0	9.5	11.3	15.0	30.0

NOTE: The probability of risk of coronary heart disease for each case is defined by the age-sex-specific logistic functions displayed in Table 20, using as independent variables systolic and diastolic blood pressures, serum cholesterol, number of cigarettes per day, left ventricular hypertrophy by electrocardiogram and glucose intolerance. All persons at risk are ranked by their probability of developing the disease. The smoothed counts are the sum of probabilities in each decile.

TABLE 18. Number of persons and percent developing Atherothrombotic Brain Infarction in each decile of risk by sex and age: Framingham Study, 16-year followup.

		Decile of Risk									
	Total	1	2	3	4	5	6	7	8	9	10
Actual		NUMBER OF CASES									
Men											
45-54	11	0	1	0	0	0	0	1	2	1	6
55-64	21	0	1	0	0	0	1	1	1	6	11
65-74	7	0	1	0	0	1	1	0	0	0	4
Total	39	0	3	0	0	1	2	2	3	7	21
Women											
45-54	9	0	0	0	0	1	1	0	1	2	4
55-64	21	0	1	1	0	0	1	1	4	4	9
65-74	11	0	0	0	0	0	2	1	2	1	5
Total	41	0	1	1	0	1	4	2	7	7	18
Smoothed											
Men											
45-54	11.1	0.1	0.2	0.3	0.3	0.5	0.6	0.8	1.1	1.7	5.5
55-64	21.0	0.2	0.3	0.4	0.5	0.7	0.9	1.2	1.6	2.8	12.4
65-74	7.0*	0.1	0.1	0.2	0.3	0.3	0.4	0.5	0.8	1.2	3.1
Total	39.1	0.4	0.6	0.9	1.1	1.5	1.9	2.5	3.5	5.7	21.0
Women											
45-54	8.9**	0.1	0.2	0.3	0.4	0.5	0.6	0.8	1.0	1.3	3.7
55-64	20.9	0.5	0.6	0.7	0.8	1.0	1.1	1.3	1.7	2.5	10.7
65-74	10.7	0.1	0.2	0.3	0.4	0.5	0.6	0.8	1.0	1.5	5.3
Total	40.5	0.7	1.0	1.3	1.6	2.0	2.3	2.9	3.7	5.3	19.7
		PERCENT OF CASES									
Men (45-74)											
Actual	99.9	0.0	7.7	0.0	0.0	2.6	5.1	5.1	7.7	17.9	53.8
Smoothed	100.0	1.0	1.5	2.3	2.8	3.8	4.9	6.4	9.0	14.6	53.7
Women (45-74)											
Actual	100.0	0.0	2.4	2.4	0.0	2.4	9.8	4.9	17.1	17.1	43.9
Smoothed	100.0	1.7	2.5	3.2	4.0	4.9	5.7	7.2	9.1	13.1	48.6

NOTE: The probability of risk of atherothrombotic brain infarction for each case is defined by the age-sex-specific logistic functions displayed in Table 20, using as independent variables systolic and diastolic blood pressures, serum cholesterol, number of cigarettes per day, left ventricular hypertrophy by electrocardiogram and glucose intolerance. All persons at risk are ranked by their probability of developing the disease. The smoothed counts are the sum of probabilities in each decile. * means that for this age group glucose intolerance is omitted and ** means that LVH-ECG is omitted.

TABLE 19. Number of persons and percent developing Intermittent Claudication in each decile of risk by sex and age: Framingham Study, 16-year followup.

		Decile of Risk									
	Total	1	2	3	4	5	6	7	8	9	10
Actual				NUMBER OF CASES							
Men											
45-54	20	0	2	0	1	1	3	2	1	4	6
55-64	45	2	1	0	3	0	1	5	8	4	21
65-74	15	0	0	0	0	3	1	1	2	4	4
Total	80	2	3	0	4	4	5	8	11	12	31
Women											
45-54	5	0	0	0	0	1	0	0	0	1	3
55-64	21	1	0	0	1	0	1	2	2	5	9
65-74	12	0	0	1	0	1	0	1	1	2	6
Total	38	1	0	1	1	2	1	3	3	8	18
Smoothed											
Men											
45-54	20.1	0.6	0.8	1.0	1.2	1.4	1.6	1.9	2.2	2.9	6.5
55-64	45.1	0.7	1.1	1.4	1.7	2.2	2.9	3.9	5.2	7.5	18.5
65-74	15.0	0.3	0.5	0.7	0.8	1.0	1.2	1.5	1.9	2.4	4.7
Total	80.2	1.6	2.4	3.1	3.7	4.6	5.7	7.3	9.3	12.8	29.7
Women											
45-54	5.1*	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.7	2.9
55-64	21.1	0.6	0.8	0.9	1.0	1.1	1.3	1.5	1.9	2.8	9.2
65-74	12.0	0.3	0.4	0.4	0.5	0.6	0.7	0.9	1.2	1.8	5.2
Total	38.2	1.0	1.3	1.4	1.6	1.9	2.2	2.7	3.5	5.3	17.3
				PERCENT OF CASES							
Men (45-74)											
Actual	100.2	2.5	3.8	0.0	5.0	5.0	6.3	10.0	13.8	15.0	38.8
Smoothed	100.0	2.0	3.0	3.9	4.6	5.7	7.1	9.1	11.6	16.0	37.0
Women (45-74)											
Actual	100.0	2.6	0.0	2.6	2.6	5.3	2.6	7.9	7.9	21.1	47.4
Smoothed	100.2	2.6	3.4	3.7	4.2	5.0	5.8	7.1	9.2	13.9	45.3

NOTE: The probability of risk of intermittent claudication for each case is defined by the age-sex-specific logistic functions displayed in Table 20, using as independent variables systolic and diastolic blood pressures, serum cholesterol, number of cigarettes per day, left ventricular hypertrophy by electrocardiogram and glucose intolerance. All persons at risk are ranked by their probability of developing the disease. The smoothed counts are the sum of probabilities in each decile. * means that for this age group glucose intolerance is omitted.

TABLE 20. Multivariate regression equations for Coronary Heart Disease, Atherothrombotic Brain Infarction and Intermittent Claudication by sex and age: Framingham Study, 16-year followup.

	Coefficient						
Age	Intercept	1	2	3	4	5	6
	CORONARY HEART DISEASE						
Men							
45-54	-8.697	.0038	.0191	.0082	.3066	.2570	.8245
55-64	-6.157	.0135	-.0023	.0038	.1970	.5080	.2140
65-74	-4.879	.0033	.0066	.0017	.0657	.2812	.9941
Women							
45-54	-8.666	.0135	.0006	.0044	.2618	.1139	1.1525
55-64	-7.592	.0210	-.0108	.0049	.0055	.3017	.1728
65-74	-9.893	.0054	.0227	.0118	-.4052	.7103	-.5696
	ATHEROTHROMBOTIC BRAIN INFARCTION						
Men							
45-54	-12.999	.0245	-.0078	.0109	.5617	.1877	1.6161
55-64	-12.438	.0108	.0474	.0007	.4131	.9343	-.1007
65-74	- 9.914	.0380	-.0185	-.0004	.6005	-.9577	----
Women							
45-54	-11.934	.0102	.0347	.0032	-.4328	----	1.0057
55-64	-10.494	.0115	.0210	.0027	.0015	1.0125	.3494
65-74	-10.821	-.0082	.0483	.0084	-.9055	.9796	.1362
	INTERMITTENT CLAUDICATION						
Men							
45-54	-8.297	.0132	-.0190	.0072	.2995	.3554	1.4022
55-64	-7.882	.0296	-.0448	.0078	.5418	.0345	1.5257
65-74	0.415	.0087	-.0717	-.0026	.0156	.4297	-.3845
Women							
45-54	-13.625	.0263	-.0093	.0088	.8022	1.0133	----
55-64	- 9.736	.0045	.0127	.0063	.3481	.5396	1.8476
65-75	- 9.534	.0108	.0148	.0026	.7674	.6015	.7972

NOTE: The six independent variables in these equations are: 1 = systolic blood pressure; 2 = diastolic blood pressure; 3 = serum cholesterol; 4 = cigarettes; 5 = left ventricular hypertrophy by electrocardiogram; and 6 = glucose intolerance. The parameters are estimated by the method of Duncan-Walker. Where ---- appears the specified variable was omitted from the equation. The variables are entered in the following units: systolic and diastolic blood pressure--mm Hg; serum cholesterol--mg%; cigarettes per day--none (0), less than 1 pack (1), 1 pack (2), more than 1 pack (3); LVH-ECG--none (0), possible (1), definite (2); and glucose intolerance--no (0), yes (1).

Figure 5
PERCENT OF CHD, ABI, AND IC INCIDENCE IN EACH DECILE OF MULTIVARIATE RISK
FRAMINGHAM STUDY, 16 - YEAR FOLLOW-UP

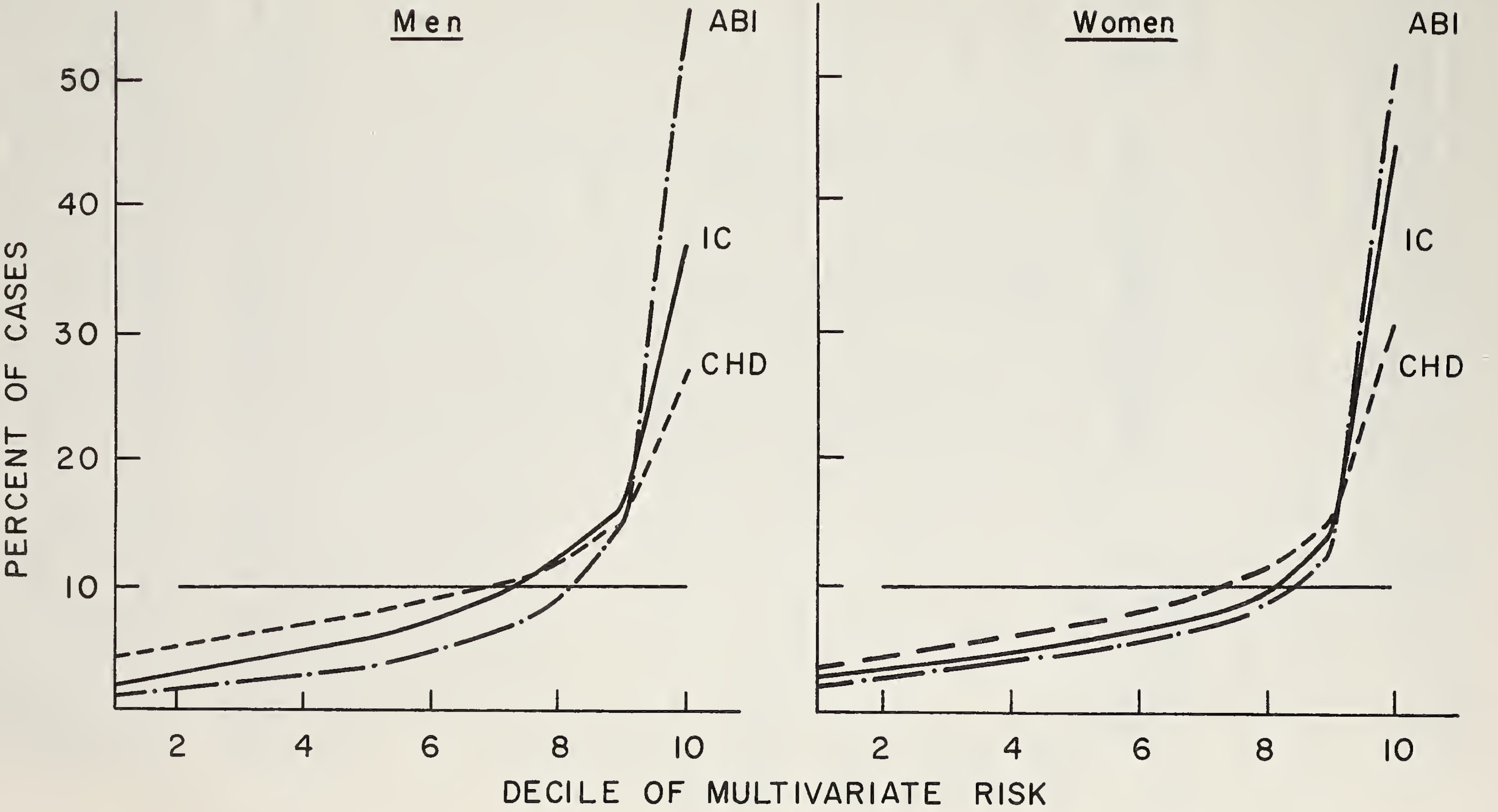


TABLE 21. Actual and expected incidence of one atherosclerotic event (Coronary Heart Disease-CHD, Atherothrombotic Brain Infarction-ABI, or Intermittent Claudication-IC) given the presence of another: Framingham Study, 16-year followup.

Event A given the presence of Event B (A/B)	Adjusting for age			Adjusting for age and certain independent variables		
	Actual	Expected[1]	Ratio*	Actual	Expected[2]	Ratio*
Men/45-74						
ABI/CHD	10	3.1	3.2	10	5.6	1.8
ABI/IC	6	1.1	5.5	6	1.9	3.2
IC/CHD	29	5.3	5.5	29	9.3	3.1
IC/ABI	1	0.8	1.3	1	0.5	2.0
CHD/ABI	5	3.3	1.5	2	3.3	0.6
CHD/IC	18	6.3	2.9	16	9.4	1.7
Women/45-74						
ABI/CHD	9	2.1	4.3	9	4.4	2.0
ABI/IC	0	0.7	---	0	1.2	---
IC/CHD	9	2.1	4.3	7	3.7	1.9
IC/ABI	1	0.6	1.7	1	0.6	1.7
CHD/ABI	4	2.1	1.9	3	2.5	1.2
CHD/IC	10	1.9	5.3	10	2.6	3.8

* Actual:Expected

1 Obtained as follows: If r_i is the age-specific incidence of Event A among persons free of B and p_i is the proportion of persons with B in the specific age group, the expected value of A/B is $\Sigma p_i r_i$.

2 Obtained as follows: For the entire population free of Event A, the probability of a person j in age group i given characteristics $x_1, \ldots x_k$ is estimated by the method of Duncan-Walker. Each person with condition B has a specified set of values for $x_1, \ldots x_k$. The sum of these probabilities is the expected value of A/B. Since some persons are missing values for one or more characteristics the number of persons in this part of the table differs from the number in the other part. The characteristics considered are systolic and diastolic blood pressure, serum cholesterol, cigarette smoking, LVH-ECG and glucose intolerance.

expected number of events against which to compare the actual number of events. The latter approach was elected.

As might be anticipated, controlling for associated risk factors reduced the excess risk of a second event. It did not eliminate it (Table 21). The one possible exception is with respect to ABI. When allowance is made for associated characteristics it does not appear that ABI carries an excess risk of subsequent CHD or IC, but the numbers involved are quite small.

The increased vulnerability of persons with CHD to other atherosclerotic events may be evidence of greater susceptiblity of the individual's vessels to the atherogenic factors. It may also derive from an effect of the cardiac impairment resulting from CHD. The excess risks of ABI and CHD associated with IC may also indicate a greater vascular vulnerability to shared atherogenic precursors.

SUMMARY AND CONCLUSIONS

This report has considered, both by univariate and multivariate analysis, the relation of certain key characteristics to the major atherosclerotic events--coronary heart disease, atherothrombotic brain infarction and intermittent claudication. These key characteristics--blood pressure, serum cholesterol, cigarette smoking, LVH-ECG and glucose intolerance--have been shown to be related to all three major atherosclerotic events.

In general, relationships appear to be as strong for women as men. When the whole set of variables is considered jointly they have a closer association with ABI and IC than with CHD. In men two of these variables--serum cholesterol and cigarette smoking--seem to bear their strongest relation to CHD at young ages, the relationship seeming to essentially disappear by the age group 65-74 years. Other age differentials are less clear, and taken as a whole, this set of variables is associated with each atherosclerotic event equally strongly in all age groups between 45 and 74 years.

These three atherosclerotic events are related not only in terms of common precursive factors but also in that both CHD and IC seem to independently predispose to other atherosclerotic events.

CHD, ABI and IC are distinguished by different levels of incidence by age and sex and also in terms of the relative importance of the key factors. The dominant factor predisposing to ABI is high blood pressure. None of the key factors is clearly dominant for CHD but glucose intolerance is only weakly related to this atherosclerotic disease and cigarette smoking has little relationship to CHD in the form of uncomplicated angina pectoris. All five factors play an important role in intermittent claudication, with glucose intolerance more important for this event than for either CHD or ABI.

In its essential form these analyses are directed toward a statistical fit of the data, both analytical and synthetic. However, the analytical data have implications for etiology and the synthetic functions may eventually prove useful for medical screening.

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PREVIOUS SECTIONS

The Framingham Study

PREVIOUS SECTIONS

Section 1. Introduction and general background
Tavia Gordon and William B. Kannel

Section 2. Follow-up to the eighth examination
Tavia Gordon

Section 3. Some characteristics of the Framingham cohort on the first 7 examinations by broad age groups
Christine Cole, Esther Allen, Manning Feinleib

Notes: Dewey Shurtleff, William P. Castelli
Lloyd E. Hawes, and Patricia M. McNamara

Section 4. Some characteristics of the Framingham cohort on the first 7 examinations by 5-year age groups
Dewey Shurtleff

Section 5. Bivariate correlations among some characteristics of the Framingham cohort at Exam 2
Dewey Shurtleff

Section 6. Smoothed average annual incidence rates by age at exam preceding event, and sex
Manning Feinleib

Section 7. Average two-year incidence rates by age at exam preceding event and sex, with total number of events and total population at risk
Manning Feinleib

Section 8. Two-year incidence by exam interval by age at Exam 1 and sex
Manning Feinleib

Criteria: William B. Kannel, William P. Castelli,
and Patricia M. McNamara

Section 9. Population alive with specified events by sex, age and level of characteristic at exam
Dewey Shurtleff

Section 10. Incidence of Coronary Heart Disease by sex, age and level of characteristic at exam for 22 characteristics
Dewey Shurtleff

The Framingham Study

PREVIOUS SECTIONS

Section 11. Incidence of Myocardial Infarction by sex, age and level of characteristic at exam for 22 characteristics
Dewey Shurtleff

Section 12. Incidence of Angina Pectoris Uncomplicated by sex, age and level of characteristic at exam for 22 characteristics
Dewey Shurtleff

Section 13. Incidence of Sudden Death from Coronary Heart Disease by sex, age and level of characteristic at exam for 22 characteristics
Dewey Shurtleff

Section 14. Incidence of Non-Sudden Death From Coronary Heart Disease by sex, age and level of characteristic at exam for 22 characteristics
Dewey Shurtleff

Section 15. Incidence of Cerebrovascular Accident by sex, age and level of characteristic at exam for 22 characteristics
Dewey Shurtleff

Section 16. Incidence of Brain Infarction by sex, age and level of characteristic at exam for 22 characteristics
Dewey Shurtleff

Section 17. Incidence of Intermittent Claudication by sex, age and level of characteristic at exam for 22 characteristics
Dewey Shurtleff

Section 18. Incidence of Congestive Heart Failure by sex, age and level of characteristic at exam for 22 characteristics
Dewey Shurtleff

Section 19. Incidence of Death by sex, age and level of characteristic at exam for 22 characteristics
Dewey Shurtleff

Section 20. Incidence of Death from Coronary Heart Disease by sex, age and level of characteristic at exam for 22 characteristics
Dewey Shurtleff

Section 21. Incidence of Death From Cardiovascular Disease by sex, age and level of characteristic at exam for 22 characteristics
Dewey Shurtleff

The Framingham Study

PREVIOUS SECTIONS

Section 22.	Incidence of Death from Cause other than Cardiovascular Disease by sex, age and level of characteristic at exam for 22 characteristics Dewey Shurtleff
Section 23.	Serum cholesterol, systolic blood pressure and Framingham relative weight as discriminators of cardiovascular disease Tavia Gordon and Joel I. Verter
Section 24.	The Framingham Diet Study: Diet and the regulation of serum cholesterol
Section 25.	Survival following certain cardiovascular events Joyce Schiffman
Section 26.	Some characteristics related to the incidence of cardiovascular disease and death: Framingham Study, 16-year follow-up. Dewey Shurtleff

APPENDIX A

RELATIVE AVERAGE ODDS

(At various levels of Systolic Blood Pressure, Serum Cholesterol, Cigarette Smoking, Left Ventricular Hypertrophy by Electrocardiogram and Glucose Intolerance)

Coronary Heart Disease	1A
Coronary Heart Disease other than Angina Pectoris	2A
Angina Pectoris Uncomplicated	3A
Atherothrombotic Brain Infarction	4A
Intermittent Claudication	5A

TABLE 1A

RELATIVE AVERAGE ODDS FOR CORONARY HEART DISEASE

Men (Table 1A-1)
Women (Table 1A-2)

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	33	1.000	1.000	1.000
74-109	345	1	0.363	0.695	0.923
110-119	797	6	0.948	0.798	0.953
120-129	1081	11	1.284	0.904	0.982
130-139	943	6	0.800	1.034	1.013
140-149	531	3	0.710	1.177	1.043
150-159	245	3	1.549	1.342	1.076
160-169	107	1	1.179	1.517	1.107
170-179	57	2	4.543	1.730	1.141
180-189	31	0	0.0	1.981	1.178
190-300	19	0	0.0	2.738	1.263

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0133	0.0088	1.51
(2) MULTIVARIATE	0.0031	0.0101	0.31

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	108	1.000	1.000	1.000
74-109	356	4	0.590	0.610	0.673
110-119	968	9	0.487	0.716	0.767
120-129	1239	21	0.896	0.821	0.858
130-139	1233	19	0.813	0.952	0.968
140-149	818	24	1.570	1.101	1.090
150-159	502	13	1.381	1.277	1.230
160-169	270	8	1.586	1.469	1.379
170-179	150	4	1.423	1.697	1.551
180-189	97	3	1.658	1.982	1.761
190-300	85	3	1.900	2.718	2.274

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0148	0.0041	3.60
(2) MULTIVARIATE	0.0121	0.0045	2.65

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	165	1.000	1.000	1.000
74-109	239	3	0.296	0.503	0.600
110-119	499	12	0.573	0.600	0.687
120-129	739	21	0.681	0.701	0.774
130-139	749	29	0.937	0.828	0.881
140-149	599	26	1.056	0.974	0.998
150-159	423	20	1.155	1.151	1.134
160-169	272	13	1.168	1.346	1.280
170-179	192	16	2.115	1.582	1.450
180-189	115	9	1.975	1.847	1.633
190-300	177	16	2.312	2.787	2.225

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0165	0.0027	6.07
(2) MULTIVARIATE	0.0127	0.0030	4.24

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	47	1.000	1.000	1.000
74-109	56	1	0.429	0.665	0.775
110-119	101	5	1.228	0.743	0.833
120-129	163	7	1.058	0.804	0.876
130-139	210	2	0.227	0.884	0.930
140-149	197	14	1.804	0.964	0.984
150-159	156	3	0.462	1.050	1.039
160-169	101	5	1.228	1.142	1.096
170-179	50	2	0.982	1.246	1.160
180-189	43	2	1.150	1.376	1.235
190-300	78	6	1.965	1.738	1.431

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0089	0.0051	1.74
(2) MULTIVARIATE	0.0057	0.0058	0.99

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIA8LES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY
8Y ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUM8ER AT RISK	CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	4156	33	1.000	1.000	1.000
96-189	762	3	0.494	0.466	0.479
190-204	494	1	0.253	0.612	0.625
205-219	596	2	0.421	0.721	0.732
220-234	659	4	0.763	0.851	0.860
235-249	488	3	0.773	1.003	1.009
250-264	388	6	1.962	1.170	1.171
265-279	276	7	3.251	1.379	1.373
280-294	201	2	1.256	1.634	1.619
295-309	123	2	2.065	1.940	1.913
310-696	169	3	2.258	3.650	3.509

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0109	0.0027	4.00
(2) MULTIVARIATE	0.0106	0.0029	3.61

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5718	108	1.000	1.000	1.000
96-189	677	6	0.464	0.514	0.553
190-204	597	8	0.706	0.644	0.679
205-219	870	7	0.421	0.739	0.769
220-234	887	22	1.321	0.848	0.870
235-249	752	15	1.057	0.973	0.986
250-264	673	11	0.863	1.102	1.103
265-279	480	11	1.218	1.267	1.252
280-294	330	5	0.799	1.462	1.425
295-309	190	7	1.987	1.670	1.607
310-696	262	16	3.378	2.710	2.432

	8	SE(B)	B/SE(8)
(1) UNIVARIATE	0.0091	0.0018	5.11
(2) MULTIVARIATE	0.0083	0.0018	4.57

MEN AGED 55-64 AT EXAM

LEVEL	NUM8ER AT RISK	CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	4004	165	1.000	1.000	1.000
96-189	489	13	0.635	0.736	0.782
190-204	422	10	0.565	0.826	0.859
205-219	544	26	1.168	0.885	0.908
220-234	617	28	1.106	0.950	0.962
235-249	573	24	1.017	1.015	1.015
250-264	512	18	0.848	1.088	1.074
265-279	338	17	1.232	1.166	1.136
280-294	215	9	1.017	1.250	1.202
295-309	146	12	2.084	1.339	1.271
310-696	148	8	1.330	1.564	1.437

	8	SE(8)	8/SE(8)
(1) UNIVARIATE	0.0046	0.0019	2.48
(2) MULTIVARIATE	0.0038	0.0019	2.01

MEN AGED 65-74 AT EXAM

LEVEL	NUM8ER AT RISK	CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	1155	47	1.000	1.000	1.000
96-189	141	3	0.512	0.945	0.892
190-204	138	7	1.260	0.968	0.935
205-219	153	9	1.473	0.981	0.960
220-234	183	10	1.363	0.993	0.984
235-249	134	3	0.540	1.006	1.011
250-264	137	5	0.893	1.020	1.039
265-279	107	2	0.449	1.033	1.066
280-294	91	3	0.804	1.046	1.094
295-309	32	4	3.368	1.060	1.124
310-696	39	1	0.620	1.084	1.175

	8	SE(B)	B/SE(8)
(1) UNIVARIATE	0.0009	0.0037	0.24
(2) MULTIVARIATE	0.0018	0.0036	0.48

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	33	1.000	1.000	1.000
NONE	1288	3	0.292	0.465	0.434
UNDER 20	644	4	0.781	0.716	0.691
20	1142	13	1.439	1.103	1.100
OVER 20	1082	13	1.519	1.698	1.752

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4316	0.1568	2.75
(2) MULTIVARIATE	0.4653	0.1701	2.74

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	108	1.000	1.000	1.000
NONE	2120	23	0.570	0.660	0.630
UNDER 20	822	13	0.835	0.863	0.845
20	1383	39	1.507	1.127	1.134
OVER 20	1393	33	1.260	1.472	1.522

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.2672	0.0805	3.32
(2) MULTIVARIATE	0.2943	0.0839	3.51

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	165	1.000	1.000	1.000
NONE	1930	65	0.811	0.871	0.796
UNDER 20	664	31	1.139	0.987	0.969
20	788	36	1.114	1.117	1.180
OVER 20	622	33	1.304	1.265	1.438

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.1242	0.0664	1.87
(2) MULTIVARIATE	0.1972	0.0680	2.90

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	47	1.000	1.000	1.000
NONE	690	28	0.997	0.968	0.951
UNDER 20	215	7	0.793	1.012	1.017
20	144	7	1.205	1.059	1.089
OVER 20	106	5	1.167	1.107	1.165

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0450	0.1438	0.31
(2) MULTIVARIATE	0.0677	0.1449	0.47

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	33	1.000	1.000	1.000
NO	4014	31	0.972	0.990	0.992
POSSIBLE	119	2	2.136	1.235	1.185
DEFINITE	23	0	0.0	1.541	1.415

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.2213	0.6148	0.36
(2) MULTIVARIATE	0.1775	0.6868	0.26

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	108	1.000	1.000	1.000
NO	5360	97	0.957	0.959	0.980
POSSIBLE	246	6	1.299	1.410	1.212
DEFINITE	112	5	2.427	2.074	1.499

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.3858	0.2114	1.82
(2) MULTIVARIATE	0.2126	0.2318	0.92

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	165	1.000	1.000	1.000
NO	3583	130	0.876	0.850	0.896
POSSIBLE	252	10	0.961	1.652	1.489
DEFINITE	169	25	4.039	3.210	2.475

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.6645	0.1157	5.74
(2) MULTIVARIATE	0.5081	0.1293	3.93

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	47	1.000	1.000	1.000
NO	988	37	0.917	0.903	0.929
POSSIBLE	91	4	1.084	1.307	1.236
DEFINITE	76	6	2.021	1.891	1.644

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.3696	0.2215	1.67
(2) MULTIVARIATE	0.2855	0.2505	1.14

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: GLUCOSE INTOLERANCE
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

MEN AGED 35-44 AT EXAM

	NUMBER		RELATIVE AVERAGE ODDS		
LEVEL	AT RISK	CASES	ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	4156	33	1.000	1.000	1.000
NO	4036	32	0.999	1.003	1.002
YES	120	1	1.050	0.911	0.916

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0963	1.0179	-0.09
(2) MULTIVARIATE	-0.0903	1.0502	-0.09

MEN AGED 45-54 AT EXAM

	NUMBER		RELATIVE AVERAGE ODDS		
LEVEL	AT RISK	CASES	ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5718	108	1.000	1.000	1.000
NO	5407	95	0.929	0.938	0.937
YES	311	13	2.266	2.078	2.091

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.7954	0.3001	2.65
(2) MULTIVARIATE	0.8025	0.3065	2.62

MEN AGED 55-64 AT EXAM

	NUMBER		RELATIVE AVERAGE ODDS		
LEVEL	AT RISK	CASES	ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	4004	165	1.000	1.000	1.000
NO	3690	147	0.965	0.957	0.981
YES	314	18	1.415	1.508	1.222

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4549	0.2452	1.86
(2) MULTIVARIATE	0.2193	0.2625	0.84

MEN AGED 65-74 AT EXAM

	NUMBER		RELATIVE AVERAGE ODDS		
LEVEL	AT RISK	CASES	ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	1155	47	1.000	1.000	1.000
NO	1040	37	0.870	0.862	0.859
YES	115	10	2.245	2.246	2.276

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.9574	0.3709	2.58
(2) MULTIVARIATE	0.9743	0.3758	2.59

TABLE 1A-2

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5110	7	1.000	1.000	1.000
74-109	961	0	0.0	0.412	0.479
110-119	1356	0	0.0	0.592	0.657
120-129	1218	4	2.402	0.825	0.876
130-139	795	0	0.0	1.136	1.156
140-149	401	1	1.822	1.600	1.556
150-159	205	1	3.574	2.185	2.039
160-169	89	0	0.0	3.005	2.689
170-179	41	0	0.0	4.306	3.674
180-189	23	0	0.0	5.896	4.826
190-300	21	1	36.450	15.989	10.937

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0332	0.0123	2.69
(2) MULTIVARIATE	0.0288	0.0146	1.97

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	7350	35	1.000	1.000	1.000
74-109	680	4	1.237	0.526	0.606
110-119	1275	3	0.493	0.642	0.712
120-129	1459	7	1.008	0.759	0.815
130-139	1430	5	0.733	0.898	0.934
140-149	913	5	1.151	1.069	1.075
150-159	630	3	1.000	1.261	1.228
160-169	368	2	1.142	1.493	1.408
170-179	241	2	1.749	1.769	1.615
180-189	170	1	1.237	2.096	1.852
190-300	184	3	3.464	3.692	2.871

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0171	0.0046	3.70
(2) MULTIVARIATE	0.0138	0.0060	2.29

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5469	105	1.000	1.000	1.000
74-109	215	1	0.239	0.366	0.413
110-119	505	2	0.203	0.455	0.503
120-129	749	10	0.691	0.551	0.596
130-139	915	10	0.564	0.665	0.706
140-149	801	11	0.711	0.807	0.840
150-159	736	12	0.847	0.979	0.998
160-169	519	14	1.416	1.181	1.182
170-179	375	16	2.277	1.428	1.401
180-189	278	9	1.709	1.724	1.658
190-300	376	20	2.870	3.044	2.731

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0194	0.0029	6.79
(2) MULTIVARIATE	0.0174	0.0032	5.43

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	1739	44	1.000	1.000	1.000
74-109	33	0	0.0	0.357	0.494
110-119	99	1	0.393	0.438	0.572
120-129	148	3	0.797	0.518	0.644
130-139	244	5	0.806	0.628	0.738
140-149	287	7	0.963	0.742	0.831
150-159	256	5	0.767	0.888	0.943
160-169	218	0	0.0	1.051	1.063
170-179	168	1	0.231	1.255	1.206
180-189	111	9	3.399	1.509	1.375
190-300	175	13	3.091	2.321	1.850

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0179	0.0050	3.58
(2) MULTIVARIATE	0.0127	0.0055	2.32

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY
BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5110	7	1.000	1.000	1.000
96-189	1457	0	0.0	0.186	0.170
190-204	890	0	0.0	0.317	0.293
205-219	743	2	1.968	0.449	0.419
220-234	675	0	0.0	0.629	0.592
235-249	490	1	1.491	0.892	0.847
250-264	316	0	0.0	1.221	1.169
265-279	221	1	3.314	1.737	1.679
280-294	151	1	4.860	2.445	2.383
295-309	76	0	0.0	3.522	3.467
310-696	91	2	16.382	21.466	23.207

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0227	0.0043	5.31
(2) MULTIVARIATE	0.0233	0.0050	4.70

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	35	1.000	1.000	1.000
96-189	741	1	0.282	0.642	0.716
190-204	721	3	0.873	0.732	0.795
205-219	888	6	1.422	0.798	0.850
220-234	1092	2	0.383	0.868	0.908
235-249	965	6	1.308	0.944	0.970
250-264	821	3	0.767	1.024	1.034
265-279	690	1	0.303	1.114	1.104
280-294	511	3	1.234	1.214	1.181
295-309	331	4	2.557	1.320	1.262
310-696	590	6	2.147	1.884	1.579

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0056	0.0019	2.94
(2) MULTIVARIATE	0.0044	0.0020	2.21

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	105	1.000	1.000	1.000
96-189	220	6	1.432	0.613	0.639
190-204	289	2	0.356	0.694	0.717
205-219	435	6	0.714	0.750	0.769
220-234	689	11	0.829	0.811	0.827
235-249	666	8	0.621	0.878	0.889
250-264	749	11	0.761	0.947	0.954
265-279	702	16	1.192	1.024	1.025
280-294	558	13	1.219	1.110	1.104
295-309	408	10	1.284	1.205	1.190
310-696	753	22	1.537	1.492	1.447

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0053	0.0020	2.65
(2) MULTIVARIATE	0.0049	0.0020	2.45

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	44	1.000	1.000	1.000
96-189	47	1	0.837	0.290	0.297
190-204	69	1	0.567	0.402	0.409
205-219	123	0	0.0	0.471	0.479
220-234	198	4	0.794	0.560	0.568
235-249	222	4	0.707	0.667	0.674
250-264	237	3	0.494	0.788	0.794
265-279	250	6	0.947	0.938	0.942
280-294	184	5	1.076	1.133	1.134
295-309	139	7	2.043	1.332	1.329
310-696	270	13	1.949	2.095	2.070

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0117	0.0032	3.70
(2) MULTIVARIATE	0.0115	0.0032	3.61

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5110	7	1.000	1.000	1.000
NONE	2325	2	0.628	0.590	0.545
UNDER 20	1656	2	0.881	0.973	0.954
20	828	2	1.765	1.605	1.670
OVER 20	301	1	2.430	2.646	2.924

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.5000	0.3675	1.36
(2) MULTIVARIATE	0.5600	0.3853	1.45

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	35	1.000	1.000	1.000
NONE	4126	18	0.916	0.906	0.809
UNDER 20	1776	8	0.946	1.034	1.051
20	1040	4	0.807	1.179	1.366
OVER 20	408	5	2.593	1.345	1.774

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.1316	0.1589	0.83
(2) MULTIVARIATE	0.2616	0.1694	1.54

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	105	1.000	1.000	1.000
NONE	3907	76	1.013	1.021	0.999
UNDER 20	962	18	0.974	0.970	1.001
20	415	9	1.132	0.922	1.002
OVER 20	185	2	0.558	0.876	1.004

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0512	0.1286	-0.40
(2) MULTIVARIATE	0.0015	0.1310	0.01

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	44	1.000	1.000	1.000
NONE	1408	38	1.069	1.083	1.084
UNDER 20	235	5	0.837	0.728	0.723
20	71	1	0.550	0.489	0.483
OVER 20	25	0	0.0	0.328	0.322

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.3979	0.3347	-1.19
(2) MULTIVARIATE	-0.4046	0.3550	-1.14

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5110	7	1.000	1.000	1.000
NO	5016	6	0.873	0.833	0.946
POSSIBLE	67	0	0.0	4.427	2.594
DEFINITE	27	1	28.038	23.528	7.112

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.6705	0.5798	2.88
(2) MULTIVARIATE	1.0087	0.6108	1.65

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	35	1.000	1.000	1.000
NO	7105	33	0.975	0.951	0.995
POSSIBLE	184	1	1.142	1.928	1.115
DEFINITE	61	1	3.483	3.908	1.249

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.7066	0.3706	1.91
(2) MULTIVARIATE	0.1136	0.5243	0.22

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	105	1.000	1.000	1.000
NO	4976	85	0.888	0.888	0.954
POSSIBLE	315	9	1.503	1.633	1.297
DEFINITE	178	11	3.365	3.002	1.765

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.6088	0.1557	3.91
(2) MULTIVARIATE	0.3077	0.1758	1.75

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	44	1.000	1.000	1.000
NO	1508	28	0.729	0.767	0.800
POSSIBLE	139	9	2.667	1.699	1.632
DEFINITE	92	7	3.172	3.761	3.331

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.7948	0.1949	4.08
(2) MULTIVARIATE	0.7134	0.2210	3.23

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: GLUCOSE INTOLERANCE
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5110	7	1.000	1.000	1.000
NO	5027	6	0.871	0.872	0.913
YES	83	1	8.890	8.730	6.259

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	2.3033	1.0852	2.12
(2) MULTIVARIATE	1.9249	1.1334	1.70

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	7350	35	1.000	1.000	1.000
NO	7123	31	0.914	0.937	0.937
YES	227	4	3.749	2.964	2.964

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.1510	0.5290	2.18
(2) MULTIVARIATE	1.1513	0.5661	2.03

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5469	105	1.000	1.000	1.000
NO	5140	95	0.962	0.968	0.988
YES	329	10	1.601	1.495	1.194

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4346	0.3363	1.29
(2) MULTIVARIATE	0.1899	0.3467	0.55

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	1739	44	1.000	1.000	1.000
NO	1577	40	1.003	1.005	1.045
YES	162	4	0.975	0.950	0.557

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0562	0.5303	-0.11
(2) MULTIVARIATE	-0.6291	0.5849	-1.08

TABLE 2A

RELATIVE AVERAGE ODDS FOR CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS

Men (Table 2A-1)
Women (Table 2A-2)

NOV 1970

TABLE 2A-1

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	27	1.000	1.000	1.000
74-109	345	1	0.445	0.688	0.921
110-119	797	5	0.965	0.793	0.952
120-129	1081	9	1.284	0.902	0.981
130-139	943	4	0.651	1.034	1.013
140-149	531	2	0.578	1.180	1.044
150-159	245	3	1.896	1.351	1.078
160-169	107	1	1.443	1.531	1.110
170-179	57	2	5.561	1.752	1.145
180-189	31	0	0.0	2.014	1.182
190-300	19	0	0.0	2.807	1.271

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0137	0.0099	1.38
(2) MULTIVARIATE	0.0032	0.0110	0.29

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	78	1.000	1.000	1.000
74-109	356	2	0.409	0.589	0.622
110-119	968	7	0.527	0.699	0.726
120-129	1239	14	0.826	0.808	0.828
130-139	1233	13	0.770	0.946	0.956
140-149	813	20	1.812	1.104	1.099
150-159	502	8	1.171	1.292	1.268
160-169	270	6	1.643	1.500	1.452
170-179	150	4	1.981	1.748	1.668
180-189	97	2	1.522	2.062	1.938
190-300	85	2	1.742	2.888	2.627

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0157	0.0048	3.30
(2) MULTIVARIATE	0.0143	0.0053	2.70

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	107	1.000	1.000	1.000
74-109	239	2	0.307	0.519	0.647
110-119	499	8	0.593	0.614	0.728
120-129	739	13	0.652	0.713	0.807
130-139	749	18	0.897	0.837	0.902
140-149	599	18	1.128	0.979	1.005
150-159	423	14	1.247	1.149	1.123
160-169	272	8	1.104	1.336	1.247
170-179	192	9	1.791	1.561	1.388
180-189	115	6	2.005	1.811	1.539
190-300	177	11	2.413	2.686	2.005

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0159	0.0033	4.76
(2) MULTIVARIATE	0.0110	0.0037	2.95

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	34	1.000	1.000	1.000
74-109	56	1	0.599	0.450	0.586
110-119	101	0	0.0	0.550	0.675
120-129	163	5	1.043	0.636	0.747
130-139	210	2	0.317	0.757	0.843
140-149	197	12	2.139	0.888	0.943
150-159	156	1	0.213	1.038	1.052
160-169	101	3	1.009	1.210	1.172
170-179	50	2	1.374	1.421	1.311
180-189	43	2	1.608	1.704	1.488
190-300	78	6	2.748	2.668	2.018

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0163	0.0055	2.98
(2) MULTIVARIATE	0.0114	0.0064	1.80

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	27	1.000	1.000	1.000
96-189	762	2	0.402	0.428	0.445
190-204	494	1	0.310	0.575	0.592
205-219	596	2	0.515	0.687	0.703
220-234	659	2	0.466	0.823	0.836
235-249	488	2	0.629	0.984	0.993
250-264	388	6	2.402	1.163	1.167
265-279	276	6	3.398	1.391	1.386
280-294	201	1	0.765	1.673	1.656
295-309	123	2	2.528	2.016	1.983
310-696	169	3	2.764	4.108	3.896

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0119	0.0029	4.13
(2) MULTIVARIATE	0.0115	0.0031	3.70

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	78	1.000	1.000	1.000
96-189	677	6	0.647	0.544	0.581
190-204	597	8	0.982	0.671	0.702
205-219	870	5	0.418	0.762	0.788
220-234	887	13	1.076	0.865	0.885
235-249	752	9	0.876	0.983	0.993
250-264	673	7	0.760	1.104	1.102
265-279	480	9	1.382	1.256	1.239
280-294	330	5	1.112	1.434	1.397
295-309	190	5	1.954	1.621	1.562
310-696	262	11	3.169	2.491	2.266

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0085	0.0021	4.11
(2) MULTIVARIATE	0.0077	0.0021	3.66

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	107	1.000	1.000	1.000
96-189	489	8	0.606	0.758	0.809
190-204	422	7	0.614	0.842	0.878
205-219	544	17	1.175	0.896	0.921
220-234	617	18	1.094	0.956	0.968
235-249	573	19	1.249	1.015	1.015
250-264	512	8	0.578	1.081	1.065
265-279	338	11	1.225	1.152	1.118
280-294	215	6	1.046	1.226	1.174
295-309	146	8	2.111	1.306	1.232
310-696	148	5	1.273	1.501	1.370

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0042	0.0023	1.82
(2) MULTIVARIATE	0.0033	0.0023	1.42

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	34	1.000	1.000	1.000
96-189	141	2	0.474	0.841	0.778
190-204	138	6	1.499	0.903	0.861
205-219	153	4	0.885	0.939	0.910
220-234	183	8	1.507	0.975	0.961
235-249	134	3	0.755	1.015	1.018
250-264	137	2	0.488	1.057	1.078
265-279	107	2	0.628	1.098	1.140
280-294	91	3	1.124	1.142	1.205
295-309	32	3	3.411	1.188	1.276
310-696	39	1	0.868	1.271	1.405

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0026	0.0043	0.61
(2) MULTIVARIATE	0.0038	0.0042	0.91

NOV 1970

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	27	1.000	1.000	1.000
NONE	1288	2	0.238	0.489	0.413
UNDER 20	644	4	0.956	0.735	0.673
20	1142	10	1.351	1.103	1.098
OVER 20	1082	11	1.571	1.657	1.790

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4066	0.1729	2.35
(2) MULTIVARIATE	0.4888	0.1904	2.57

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5719	78	1.000	1.000	1.000
NONE	2120	13	0.446	0.588	0.562
UNDER 20	822	10	0.890	0.819	0.803
20	1383	31	1.658	1.142	1.146
OVER 20	1393	24	1.268	1.592	1.637

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.3321	0.0972	3.42
(2) MULTIVARIATE	0.3564	0.1000	3.56

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	107	1.000	1.000	1.000
NONE	1930	36	0.692	0.782	0.705
UNDER 20	664	22	1.248	0.965	0.939
20	789	26	1.243	1.191	1.250
OVER 20	622	23	1.398	1.470	1.664

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.2102	0.0812	2.59
(2) MULTIVARIATE	0.2861	0.0836	3.42

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	34	1.000	1.000	1.000
NONE	690	20	0.984	1.011	0.992
UNDER 20	215	7	1.110	0.996	1.003
20	144	4	0.942	0.981	1.015
OVER 20	106	3	0.960	0.966	1.027

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0150	0.1735	-0.09
(2) MULTIVARIATE	0.0115	0.1754	0.07

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                         RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
                      OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

                 EVENT:  CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
        CHARACTERISTIC:  LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
     CONTROL VARIABLES:  SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
                         GLUCOSE INTOLERANCE


                MEN AGED 35-44 AT EXAM                                        MEN AGED 45-54 AT EXAM

               NUMBER         RELATIVE AVERAGE ODDS                          NUMBER         RELATIVE AVERAGE ODDS
 LEVEL     AT RISK   CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2     LEVEL     AT RISK   CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2

  TOTAL     4156       27     1.000     1.000      1.000         TOTAL     5718       78     1.000     1.000      1.000

 NO         4014       25     0.958     0.981      0.985        NO         5360       72     0.985     0.979      1.001
 POSSIBLE    119        2     2.614     1.438      1.342        POSSIBLE    246        3     0.893     1.217      0.989
 DEFINITE     23        0     0.0       2.108      1.827        DEFINITE    112        3     1.990     1.513      0.977

                   B       SE(B)    B/SE(B)                                        B       SE(B)    B/SE(B)

(1) UNIVARIATE    0.3827  0.6093    0.63                        (1) UNIVARIATE    0.2174  0.2807    0.77
(2) MULTIVARIATE  0.3088  0.6910    0.45                        (2) MULTIVARIATE -0.0119  0.3038   -0.04


                MEN AGED 55-64 AT EXAM                                        MEN AGED 65-74 AT EXAM

               NUMBER         RELATIVE AVERAGE ODDS                          NUMBER         RELATIVE AVERAGE ODDS
 LEVEL     AT RISK   CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2     LEVEL     AT RISK   CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2

  TOTAL     4004      107     1.000     1.000      1.000         TOTAL     1155       34     1.000     1.000      1.000

 NO         3583       80     0.832     0.812      0.847        NO          988       24     0.821     0.812      0.881
 POSSIBLE    252        8     1.194     1.766      1.660        POSSIBLE     91        4     1.516     1.514      1.364
 DEFINITE    169       19     4.613     3.838      3.253        DEFINITE     76        6     2.826     2.823      2.112

                   B       SE(B)    B/SE(B)                                        B       SE(B)    B/SE(B)

(1) UNIVARIATE    0.7764  0.1333    5.83                        (1) UNIVARIATE    0.6228  0.2284    2.73
(2) MULTIVARIATE  0.6727  0.1511    4.45                        (2) MULTIVARIATE  0.4371  0.2679    1.63
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NOV 1970

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: GLUCOSE INTOLERANCE
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

MEN AGED 35-44 AT EXAM

	NUMBER		RELATIVE AVERAGE ODDS		
LEVEL	AT RISK	CASES	ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	4156	27	1.000	1.000	1.000
NO	4036	26	0.992	0.996	0.998
YES	120	1	1.285	1.133	1.075

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.1285	1.0214	0.13
(2) MULTIVARIATE	0.0749	1.0650	0.07

MEN AGED 45-54 AT EXAM

	NUMBER		RELATIVE AVERAGE ODDS		
LEVEL	AT RISK	CASES	ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5718	78	1.000	1.000	1.000
NO	5407	67	0.907	0.915	0.915
YES	311	11	2.651	2.474	2.472

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.9943	0.3293	3.02
(2) MULTIVARIATE	0.9935	0.3360	2.96

MEN AGED 55-64 AT EXAM

	NUMBER		RELATIVE AVERAGE ODDS		
LEVEL	AT RISK	CASES	ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	4004	107	1.000	1.000	1.000
NO	3690	95	0.962	0.956	0.981
YES	314	12	1.447	1.517	1.228

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4617	0.3010	1.53
(2) MULTIVARIATE	0.2249	0.3217	0.70

MEN AGED 65-74 AT EXAM

	NUMBER		RELATIVE AVERAGE ODDS		
LEVEL	AT RISK	CASES	ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	1155	34	1.000	1.000	1.000
NO	1040	25	0.812	0.802	0.791
YES	115	9	2.799	2.790	2.889

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.2464	0.4019	3.10
(2) MULTIVARIATE	1.2954	0.4112	3.15

TABLE 2A-2

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
74-109	0	0	0.0	0.0	0.0
110-119	0	0	0.0	0.0	0.0
120-129	0	0	0.0	0.0	0.0
130-139	0	0	0.0	0.0	0.0
140-149	0	0	0.0	0.0	0.0
150-159	0	0	0.0	0.0	0.0
160-169	0	0	0.0	0.0	0.0
170-179	0	0	0.0	0.0	0.0
180-189	0	0	0.0	0.0	0.0
190-300	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	17	1.000	1.000	1.000
74-109	680	3	1.911	0.929	1.033
110-119	1275	1	0.339	0.954	1.021
120-129	1459	3	0.889	0.975	1.010
130-139	1430	3	0.907	0.997	1.000
140-149	913	4	1.898	1.021	0.990
150-159	630	2	1.374	1.043	0.980
160-169	368	0	0.0	1.067	0.970
170-179	241	1	1.797	1.091	0.960
180-189	170	0	0.0	1.116	0.951
190-300	184	0	0.0	1.188	0.925

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0023	0.0092	0.25
(2) MULTIVARIATE	-0.0010	0.0109	-0.09

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	45	1.000	1.000	1.000
74-109	215	0	0.0	0.389	0.339
110-119	505	2	0.479	0.479	0.428
120-129	749	3	0.485	0.573	0.523
130-139	915	5	0.662	0.686	0.640
140-149	801	4	0.605	0.824	0.786
150-159	736	4	0.659	0.989	0.965
160-169	519	8	1.887	1.182	1.178
170-179	375	4	1.300	1.415	1.441
180-189	278	7	3.113	1.692	1.761
190-300	376	8	2.620	2.985	3.250

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0184	0.0044	4.21
(2) MULTIVARIATE	0.0206	0.0048	4.32

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	21	1.000	1.000	1.000
74-109	33	0	0.0	0.275	0.415
110-119	99	1	0.835	0.353	0.496
120-129	148	2	1.121	0.433	0.574
130-139	244	1	0.337	0.548	0.678
140-149	287	3	0.864	0.671	0.784
150-159	256	1	0.321	0.835	0.915
160-169	218	0	0.0	1.025	1.059
170-179	168	1	0.490	1.273	1.237
180-189	111	5	3.859	1.593	1.451
190-300	175	7	3.409	2.724	2.098

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0218	0.0069	3.17
(2) MULTIVARIATE	0.0155	0.0077	2.03

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
96-189	0	0	0.0	0.0	0.0
190-204	0	0	0.0	0.0	0.0
205-219	0	0	0.0	0.0	0.0
220-234	0	0	0.0	0.0	0.0
235-249	0	0	0.0	0.0	0.0
250-264	0	0	0.0	0.0	0.0
265-279	0	0	0.0	0.0	0.0
280-294	0	0	0.0	0.0	0.0
295-309	0	0	0.0	0.0	0.0
310-696	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	17	1.000	1.000	1.000
96-189	741	0	0.0	0.541	0.621
190-204	721	1	0.599	0.639	0.714
205-219	888	2	0.974	0.712	0.783
220-234	1092	1	0.395	0.792	0.855
235-249	965	2	0.896	0.880	0.934
250-264	821	2	1.053	0.975	1.018
265-279	690	1	0.626	1.083	1.112
280-294	511	1	0.846	1.208	1.218
295-309	331	3	3.945	1.343	1.332
310-696	590	4	2.944	2.598	1.997

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0071	0.0021	3.42
(2) MULTIVARIATE	0.0060	0.0022	2.74

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	45	1.000	1.000	1.000
96-189	220	4	2.232	0.524	0.557
190-204	289	0	0.0	0.616	0.645
205-219	435	2	0.557	0.681	0.707
220-234	689	3	0.527	0.754	0.776
235-249	666	2	0.363	0.835	0.852
250-264	749	5	0.810	0.921	0.932
265-279	702	9	1.565	1.019	1.021
280-294	558	5	1.090	1.131	1.124
295-309	408	6	1.799	1.256	1.237
310-696	753	9	1.458	1.668	1.599

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0068	0.0029	2.32
(2) MULTIVARIATE	0.0062	0.0029	2.16

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	21	1.000	1.000	1.000
96-189	47	1	1.778	0.281	0.309
190-204	69	0	0.0	0.392	0.422
205-219	123	0	0.0	0.462	0.492
220-234	198	2	0.835	0.551	0.580
235-249	222	2	0.744	0.659	0.685
250-264	237	0	0.0	0.782	0.803
265-279	250	2	0.660	0.934	0.947
280-294	184	4	1.818	1.132	1.134
295-309	139	3	1.805	1.336	1.323
310-696	270	7	2.177	2.125	2.030

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0119	0.0044	2.68
(2) MULTIVARIATE	0.0111	0.0044	2.50

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

	NUMBER		RELATIVE AVERAGE ODDS		
LEVEL	AT RISK	CASES	ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NONE	0	0	0.0	0.0	0.0
UNDER 20	0	0	0.0	0.0	0.0
20	0	0	0.0	0.0	0.0
OVER 20	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

	NUMBER		RELATIVE AVERAGE ODDS		
LEVEL	AT RISK	CASES	ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	7350	17	1.000	1.000	1.000
NONE	4126	5	0.523	0.584	0.514
UNDER 20	1776	5	1.218	1.021	0.989
20	1040	3	1.248	1.784	1.902
OVER 20	408	4	4.271	3.119	3.658

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.5584	0.2048	2.73
(2) MULTIVARIATE	0.6538	0.2230	2.93

WOMEN AGED 55-64 AT EXAM

	NUMBER		RELATIVE AVERAGE ODDS		
LEVEL	AT RISK	CASES	ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5469	45	1.000	1.000	1.000
NONE	3907	27	0.839	0.895	0.877
UNDER 20	962	12	1.523	1.116	1.131
20	415	4	1.173	1.392	1.459
OVER 20	185	2	1.317	1.736	1.882

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.2209	0.1673	1.32
(2) MULTIVARIATE	0.2546	0.1661	1.53

WOMEN AGED 65-74 AT EXAM

	NUMBER		RELATIVE AVERAGE ODDS		
LEVEL	AT RISK	CASES	ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	1739	21	1.000	1.000	1.000
NONE	1408	19	1.119	1.137	1.139
UNDER 20	235	2	0.702	0.507	0.499
20	71	0	0.0	0.226	0.219
OVER 20	25	0	0.0	0.101	0.096

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.8077	0.6465	-1.25
(2) MULTIVARIATE	-0.8251	0.6754	-1.22

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
POSSIBLE	0	0	0.0	0.0	0.0
DEFINITE	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
POSSIBLE	0	0	0.0	0.0	0.0
DEFINITE	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	45	1.000	1.000	1.000
NO	4976	41	1.001	1.007	1.045
POSSIBLE	315	3	1.159	0.948	0.637
DEFINITE	178	1	0.681	0.892	0.388

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0605	0.3778	-0.16
(2) MULTIVARIATE	-0.4949	0.3980	-1.24

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	21	1.000	1.000	1.000
NO	1508	12	0.656	0.722	0.789
POSSIBLE	139	5	3.053	1.778	1.654
DEFINITE	92	4	3.719	4.378	3.465

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.9011	0.2612	3.45
(2) MULTIVARIATE	0.7396	0.3032	2.44

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: GLUCOSE INTOLERANCE
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
YES	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	17	1.000	1.000	1.000
NO	7123	14	0.849	0.880	0.881
YES	227	3	5.777	4.779	4.746

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.6925	0.6296	2.69
(2) MULTIVARIATE	1.6845	0.7040	2.39

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	45	1.000	1.000	1.000
NO	5140	41	0.969	0.970	0.984
YES	329	4	1.483	1.467	1.249

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4136	0.5268	0.79
(2) MULTIVARIATE	0.2386	0.5334	0.45

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	21	1.000	1.000	1.000
NO	1577	18	0.945	0.952	1.018
YES	162	3	1.544	1.468	0.827

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4330	0.6267	0.69
(2) MULTIVARIATE	-0.2073	0.7062	-0.29

TABLE 3A
RELATIVE AVERAGE ODDS FOR ANGINA PECTORIS UNCOMPLICATED

Men (Table 3A-1)
Women (Table 3A-2)

TABLE 3A-1

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	6	1.000	1.000	1.000
74-109	345	0	0.0	0.730	1.002
110-119	797	1	0.869	0.824	1.001
120-129	1081	2	1.282	0.919	1.001
130-139	943	2	1.470	1.033	1.000
140-149	531	1	1.305	1.156	0.999
150-159	245	0	0.0	1.297	0.998
160-169	107	0	0.0	1.442	0.997
170-179	57	0	0.0	1.618	0.996
180-189	31	0	0.0	1.821	0.995
190-300	19	0	0.0	2.406	0.993

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0116	0.0202	0.57
(2) MULTIVARIATE	-0.0001	0.0242	-0.00

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	30	1.000	1.000	1.000
74-109	356	2	1.071	0.677	0.829
110-119	968	2	0.393	0.771	0.885
120-129	1239	7	1.077	0.860	0.935
130-139	1233	6	0.927	0.969	0.992
140-149	818	4	0.932	1.089	1.052
150-159	502	5	1.907	1.227	1.116
160-169	270	2	1.415	1.373	1.181
170-179	150	0	0.0	1.542	1.252
180-189	97	1	1.975	1.748	1.333
190-300	85	1	2.257	2.247	1.508

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0119	0.0078	1.52
(2) MULTIVARIATE	0.0060	0.0088	0.68

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	58	1.000	1.000	1.000
74-109	239	1	0.286	0.510	0.558
110-119	499	4	0.550	0.607	0.651
120-129	739	8	0.745	0.706	0.744
130-139	749	11	1.014	0.832	0.860
140-149	599	8	0.921	0.976	0.989
150-159	423	6	0.979	1.150	1.143
160-169	272	5	1.274	1.342	1.309
170-179	192	7	2.574	1.572	1.506
180-189	115	3	1.822	1.831	1.722
190-300	177	5	1.978	2.741	2.446

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0162	0.0043	3.73
(2) MULTIVARIATE	0.0143	0.0048	2.95

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	13	1.000	1.000	1.000
74-109	56	0	0.0	2.144	2.137
110-119	101	5	4.575	1.640	1.637
120-129	163	2	1.091	1.366	1.365
130-139	210	0	0.0	1.100	1.100
140-149	197	2	0.901	0.899	0.900
150-159	156	2	1.141	0.739	0.741
160-169	101	2	1.775	0.609	0.611
170-179	50	0	0.0	0.499	0.500
180-189	43	0	0.0	0.397	0.399
190-300	78	0	0.0	0.251	0.253

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0205	0.0130	-1.58
(2) MULTIVARIATE	-0.0204	0.0130	-1.57

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY
BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	6	1.000	1.000	1.000
96-189	762	1	0.909	0.742	0.765
190-204	494	0	0.0	0.839	0.855
205-219	596	0	0.0	0.902	0.913
220-234	659	2	2.106	0.970	0.975
235-249	488	1	1.420	1.043	1.041
250-264	388	0	0.0	1.116	1.106
265-279	276	1	2.515	1.199	1.181
280-294	201	1	3.458	1.292	1.264
295-309	123	0	0.0	1.394	1.353
310-696	169	0	0.0	1.752	1.658

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0048	0.0081	0.60
(2) MULTIVARIATE	0.0044	0.0084	0.52

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	30	1.000	1.000	1.000
96-189	677	0	0.0	0.494	0.555
190-204	597	0	0.0	0.625	0.680
205-219	870	2	0.437	0.722	0.770
220-234	887	9	1.944	0.835	0.871
235-249	752	6	1.525	0.965	0.986
250-264	673	4	1.134	1.100	1.103
265-279	480	2	0.793	1.274	1.251
280-294	330	0	0.0	1.480	1.423
295-309	190	2	2.017	1.703	1.605
310-696	262	5	3.689	2.875	2.423

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0096	0.0029	3.34
(2) MULTIVARIATE	0.0082	0.0029	2.85

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	58	1.000	1.000	1.000
96-189	489	5	0.703	0.711	0.751
190-204	422	3	0.487	0.808	0.837
205-219	544	9	1.145	0.872	0.893
220-234	617	10	1.121	0.943	0.954
235-249	573	5	0.599	1.015	1.015
250-264	512	10	1.355	1.095	1.083
265-279	338	6	1.230	1.182	1.156
280-294	215	3	0.963	1.276	1.234
295-309	146	4	1.916	1.377	1.316
310-696	148	3	1.408	1.638	1.520

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0051	0.0031	1.68
(2) MULTIVARIATE	0.0044	0.0031	1.42

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	13	1.000	1.000	1.000
96-189	141	1	0.627	1.263	1.281
190-204	138	1	0.641	1.136	1.144
205-219	153	5	2.968	1.074	1.078
220-234	183	2	0.971	1.017	1.017
235-249	134	0	0.0	0.960	0.957
250-264	137	3	1.967	0.906	0.899
265-279	107	0	0.0	0.857	0.848
280-294	91	0	0.0	0.810	0.798
295-309	32	1	2.834	0.765	0.751
310-696	39	0	0.0	0.697	0.680

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0038	0.0070	-0.54
(2) MULTIVARIATE	-0.0040	0.0070	-0.58

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	4156	6	1.000	1.000	1.000
NONE	1288	1	0.537	0.375	0.512
UNDER 20	644	0	0.0	0.639	0.752
20	1142	3	1.822	1.091	1.103
OVER 20	1082	2	1.281	1.863	1.620

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.5348	0.3720	1.44
(2) MULTIVARIATE	0.3838	0.3798	1.01

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5718	30	1.000	1.000	1.000
NONE	2120	10	0.899	0.851	0.824
UNDER 20	822	3	0.695	0.952	0.941
20	1383	8	1.103	1.065	1.075
OVER 20	1393	9	1.233	1.191	1.228

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.1121	0.1443	0.78
(2) MULTIVARIATE	0.1327	0.1542	0.86

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	4004	58	1.000	1.000	1.000
NONE	1930	29	1.038	1.043	0.982
UNDER 20	664	9	0.935	1.000	0.999
20	788	10	0.874	0.958	1.017
OVER 20	622	10	1.112	0.919	1.034

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0423	0.1141	-0.37
(2) MULTIVARIATE	0.0173	0.1170	0.15

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	1155	13	1.000	1.000	1.000
NONE	690	8	1.030	0.863	0.872
UNDER 20	215	0	0.0	1.035	1.034
20	144	3	1.869	1.242	1.227
OVER 20	106	2	1.689	1.489	1.456

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.1818	0.2521	0.72
(2) MULTIVARIATE	0.1711	0.2563	0.67

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
POSSIBLE	0	0	0.0	0.0	0.0
DEFINITE	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	30	1.000	1.000	1.000
NO	5360	25	0.888	0.913	0.929
POSSIBLE	246	3	2.341	1.779	1.657
DEFINITE	112	2	3.447	3.469	2.954

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.6676	0.3172	2.10
(2) MULTIVARIATE	0.5783	0.3545	1.63

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	58	1.000	1.000	1.000
NO	3583	50	0.963	0.934	0.984
POSSIBLE	252	2	0.544	1.333	1.088
DEFINITE	169	6	2.904	1.904	1.203

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.3561	0.2194	1.62
(2) MULTIVARIATE	0.1003	0.2460	0.41

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
POSSIBLE	0	0	0.0	0.0	0.0
DEFINITE	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: GLUCOSE INTOLERANCE
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
YES	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	30	1.000	1.000	1.000
NO	5407	28	0.987	0.995	0.993
YES	311	2	1.227	1.082	1.119

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0840	0.7317	0.11
(2) MULTIVARIATE	0.1191	0.7374	0.16

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	58	1.000	1.000	1.000
NO	3690	52	0.972	0.961	0.983
YES	314	6	1.325	1.453	1.200

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4126	0.4055	1.02
(2) MULTIVARIATE	0.1996	0.4416	0.45

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	13	1.000	1.000	1.000
NO	1040	12	1.025	1.025	1.022
YES	115	1	0.771	0.777	0.805

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.2770	1.0455	-0.26
(2) MULTIVARIATE	-0.2387	1.0526	-0.23

TABLE 3A-2

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5110	5	1.000	1.000	1.000
74-109	961	0	0.0	0.541	0.629
110-119	1356	0	0.0	0.711	0.781
120-129	1218	3	2.521	0.913	0.951
130-139	795	0	0.0	1.161	1.150
140-149	401	1	2.552	1.501	1.409
150-159	205	1	5.005	1.896	1.694
160-169	89	0	0.0	2.409	2.047
170-179	41	0	0.0	3.156	2.533
180-189	23	0	0.0	3.996	3.052
190-300	21	0	0.0	7.849	5.039

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0249	0.0176	1.41
(2) MULTIVARIATE	0.0197	0.0222	0.89

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	18	1.000	1.000	1.000
74-109	680	1	0.600	0.000	0.445
110-119	1275	2	0.640	0.000	0.566
120-129	1459	4	1.120	0.000	0.693
130-139	1430	2	0.570	0.000	0.850
140-149	913	1	0.447	0.000	1.048
150-159	630	1	0.648	0.000	1.280
160-169	368	2	2.226	0.000	1.570
170-179	241	1	1.697	0.000	1.927
180-189	170	1	2.410	0.000	2.365
190-300	184	3	6.751	39.946	4.849

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.2462	0.0053	46.77
(2) MULTIVARIATE	0.0207	0.0071	2.93

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	60	1.000	1.000	1.000
74-109	215	1	0.421	0.365	0.494
110-119	505	0	0.0	0.455	0.581
120-129	749	7	0.850	0.550	0.668
130-139	915	5	0.495	0.665	0.768
140-149	801	7	0.795	0.807	0.885
150-159	736	8	0.991	0.979	1.020
160-169	519	6	1.054	1.181	1.171
170-179	375	12	2.980	1.428	1.346
180-189	278	2	0.653	1.724	1.546
190-300	376	12	2.972	3.045	2.297

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0194	0.0036	5.38
(2) MULTIVARIATE	0.0142	0.0042	3.42

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	23	1.000	1.000	1.000
74-109	33	0	0.0	0.481	0.603
110-119	99	0	0.0	0.559	0.671
120-129	148	1	0.508	0.632	0.732
130-139	244	4	1.243	0.728	0.809
140-149	287	4	1.055	0.824	0.883
150-159	256	4	1.184	0.939	0.970
160-169	218	0	0.0	1.063	1.059
170-179	168	0	0.0	1.212	1.162
180-189	111	4	2.789	1.387	1.279
190-300	175	6	2.649	1.888	1.584

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0132	0.0071	1.84
(2) MULTIVARIATE	0.0093	0.0075	1.24

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY
BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5110	5	1.000	1.000	1.000
96-189	1457	0	0.0	0.237	0.191
190-204	890	0	0.0	0.388	0.324
205-219	743	2	2.756	0.535	0.457
220-234	675	0	0.0	0.730	0.639
235-249	490	0	0.0	1.008	0.904
250-264	316	0	0.0	1.347	1.235
265-279	221	1	4.641	1.866	1.752
280-294	151	1	6.807	2.557	2.459
295-309	76	0	0.0	3.584	3.534
310-696	91	1	11.344	16.908	21.013

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0210	0.0044	4.77
(2) MULTIVARIATE	0.0226	0.0052	4.37

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	18	1.000	1.000	1.000
96-189	741	1	0.550	0.918	1.011
190-204	721	2	1.133	0.945	1.007
205-219	888	4	1.843	0.962	1.005
220-234	1092	1	0.373	0.980	1.002
235-249	965	4	1.695	0.997	1.000
250-264	821	1	0.497	1.015	0.998
265-279	690	0	0.0	1.033	0.996
280-294	511	2	1.601	1.052	0.993
295-309	331	1	1.234	1.071	0.991
310-696	590	2	1.385	1.123	0.985

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0012	0.0048	0.25
(2) MULTIVARIATE	-0.0002	0.0051	-0.03

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	60	1.000	1.000	1.000
96-189	220	2	0.827	0.698	0.715
190-204	289	2	0.628	0.766	0.781
205-219	435	4	0.837	0.812	0.824
220-234	689	8	1.059	0.861	0.870
235-249	666	6	0.820	0.913	0.920
250-264	749	6	0.728	0.966	0.970
265-279	702	7	0.908	1.024	1.024
280-294	558	8	1.311	1.088	1.083
295-309	408	4	0.893	1.156	1.146
310-696	753	13	1.584	1.353	1.326

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0039	0.0027	1.47
(2) MULTIVARIATE	0.0037	0.0027	1.38

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	23	1.000	1.000	1.000
96-189	47	0	0.0	0.315	0.309
190-204	69	1	1.097	0.428	0.423
205-219	123	0	0.0	0.497	0.492
220-234	198	2	0.761	0.585	0.580
235-249	222	2	0.678	0.690	0.685
250-264	237	3	0.957	0.807	0.803
265-279	250	4	1.213	0.950	0.948
280-294	184	1	0.408	1.134	1.134
295-309	139	4	2.211	1.321	1.323
310-696	270	6	1.696	2.013	2.029

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0110	0.0043	2.55
(2) MULTIVARIATE	0.0111	0.0044	2.55

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5110	5	1.000	1.000	1.000
NONE	2325	2	0.879	1.011	0.955
UNDER 20	1656	2	1.235	0.998	1.008
20	828	1	1.235	0.985	1.065
OVER 20	301	0	0.0	0.972	1.125

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0130	0.4983	-0.03
(2) MULTIVARIATE	0.0547	0.5058	0.11

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	18	1.000	1.000	1.000
NONE	4126	13	1.287	1.266	1.167
UNDER 20	1776	3	0.689	0.814	0.899
20	1040	1	0.392	0.523	0.692
OVER 20	408	1	1.001	0.336	0.533

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.4420	0.2980	-1.48
(2) MULTIVARIATE	-0.2610	0.3152	-0.83

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	60	1.000	1.000	1.000
NONE	3907	49	1.145	1.118	1.105
UNDER 20	962	6	0.566	0.809	0.833
20	415	5	1.099	0.586	0.628
OVER 20	185	0	0.0	0.424	0.474

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.3231	0.2024	-1.60
(2) MULTIVARIATE	-0.2825	0.2127	-1.33

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	23	1.000	1.000	1.000
NONE	1408	19	1.021	1.037	1.036
UNDER 20	235	3	0.965	0.887	0.890
20	71	1	1.066	0.759	0.764
OVER 20	25	0	0.0	0.649	0.655

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.1562	0.3865	-0.40
(2) MULTIVARIATE	-0.1527	0.4080	-0.37

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                           RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
                          OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

                      EVENT:  ANGINA PECTORIS UNCOMPLICATED
             CHARACTERISTIC:  LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
          CONTROL VARIABLES:  SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
                              GLUCOSE INTOLERANCE

                  WOMEN AGED 35-44 AT EXAM                                      WOMEN AGED 45-54 AT EXAM

             NUMBER             RELATIVE AVERAGE ODDS                     NUMBER           RELATIVE AVERAGE ODDS
 LEVEL    AT RISK  CASES    ACTUAL  SMOOTHED-1  SMOOTHED-2     LEVEL    AT RISK  CASES    ACTUAL  SMOOTHED-1  SMOOTHED-2

   TOTAL       0      0      0.0       0.0        0.0            TOTAL   7350     18      1.000     1.000       1.000

 NO            0      0      0.0       0.0        0.0          NO        7105     16      0.919     0.890       0.984
 POSSIBLE      0      0      0.0       0.0        0.0          POSSIBLE   184      1      2.226     2.755       1.342
 DEFINITE      0      0      0.0       0.0        0.0          DEFINITE    61      1      6.789     8.533       1.830

                      B      SE(B)    B/SE(B)                                      B      SE(B)    B/SE(B)

(1) UNIVARIATE     0.0      0.0       0.0                    (1) UNIVARIATE     1.1303  0.3717     3.04
(2) MULTIVARIATE   0.0      0.0       0.0                    (2) MULTIVARIATE   0.3103  0.5470     0.57

                  WOMEN AGED 55-64 AT EXAM                                      WOMEN AGED 65-74 AT EXAM

             NUMBER             RELATIVE AVERAGE ODDS                     NUMBER           RELATIVE AVERAGE ODDS
 LEVEL    AT RISK  CASES    ACTUAL  SMOOTHED-1  SMOOTHED-2     LEVEL    AT RISK  CASES    ACTUAL  SMOOTHED-1  SMOOTHED-2

   TOTAL    5469     60      1.000     1.000      1.000          TOTAL   1739     23      1.000     1.000       1.000

 NO         4976     44      0.804     0.814      0.877        NO        1508     16      0.800     0.826       0.830
 POSSIBLE    315      6      1.750     1.926      1.683        POSSIBLE   139      4      2.211     1.572       1.561
 DEFINITE    178     10      5.366     4.555      3.228        DEFINITE    92      3      2.515     2.992       2.935

                      B      SE(B)    B/SE(B)                                      B      SE(B)    B/SE(B)

(1) UNIVARIATE     0.8609   0.1733    4.97                   (1) UNIVARIATE     0.6437  0.2836     2.27
(2) MULTIVARIATE   0.6515   0.2008    3.24                   (2) MULTIVARIATE   0.6313  0.3125     2.02
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                        RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
                       OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

                   EVENT:  ANGINA PECTORIS UNCOMPLICATED
          CHARACTERISTIC:  GLUCOSE INTOLERANCE
       CONTROL VARIABLES:  SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
                           LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

                 WOMEN AGED 35-44 AT EXAM                                          WOMEN AGED 45-54 AT EXAM

              NUMBER            RELATIVE AVERAGE ODDS                          NUMBER            RELATIVE AVERAGE ODDS
 LEVEL      AT RISK  CASES    ACTUAL  SMOOTHED-1  SMOOTHED-2         LEVEL    AT RISK  CASES    ACTUAL  SMOOTHED-1  SMOOTHED-2

   TOTAL        0      0      0.0        0.0         0.0               TOTAL    7350     18      1.000      1.000       1.000

 NO             0      0      0.0        0.0         0.0           NO          7123     17      0.974      0.988       0.985
 YES            0      0      0.0        0.0         0.0           YES          227      1      1.802      1.371       1.481

                     B       SE(B)    B/SE(B)                                        B       SE(B)    B/SE(B)

(1) UNIVARIATE    0.0      0.0       0.0                           (1) UNIVARIATE    0.3273  1.0245   0.32
(2) MULTIVARIATE  0.0      0.0       0.0                           (2) MULTIVARIATE  0.4085  1.0385   0.39

                 WOMEN AGED 55-64 AT EXAM                                          WOMEN AGED 65-74 AT EXAM

              NUMBER            RELATIVE AVERAGE ODDS                          NUMBER            RELATIVE AVERAGE ODDS
 LEVEL      AT RISK  CASES    ACTUAL  SMOOTHED-1  SMOOTHED-2         LEVEL    AT RISK  CASES    ACTUAL  SMOOTHED-1  SMOOTHED-2

   TOTAL     5469     60      1.000      1.000       1.000             TOTAL    1739     23      1.000      1.000       1.000

 NO          5140     54      0.957      0.968       0.989         NO          1577     22      1.056      1.055       1.073
 YES          329      6      1.675      1.503       1.169         YES          162      1      0.463      0.462       0.285

                     B       SE(B)    B/SE(B)                                        B       SE(B)    B/SE(B)

(1) UNIVARIATE    0.4405   0.4318    1.02                          (1) UNIVARIATE   -0.8264  1.0258  -0.81
(2) MULTIVARIATE  0.1670   0.4475    0.37                          (2) MULTIVARIATE -1.3262  1.0667  -1.24
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TABLE 4A

RELATIVE AVERAGE ODDS FOR ATHEROTHROMBOTIC BRAIN INFARCTION

Men (Table 4A-1)
Women (Table 4A-2)

TABLE 4A-1

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ATHEROTHROMBOTIC BRAIN INFARCTION
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
74-109	0	0	0.0	0.0	0.0
110-119	0	0	0.0	0.0	0.0
120-129	0	0	0.0	0.0	0.0
130-139	0	0	0.0	0.0	0.0
140-149	0	0	0.0	0.0	0.0
150-159	0	0	0.0	0.0	0.0
160-169	0	0	0.0	0.0	0.0
170-179	0	0	0.0	0.0	0.0
180-189	0	0	0.0	0.0	0.0
190-300	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5940	11	1.000	1.000	1.000
74-109	369	0	0.0	0.359	0.472
110-119	1004	3	1.615	0.485	0.595
120-129	1289	0	0.0	0.628	0.726
130-139	1277	2	0.845	0.828	0.898
140-149	850	0	0.0	1.088	1.109
150-159	527	1	1.025	1.433	1.371
160-169	277	3	5.901	1.871	1.684
170-179	160	0	0.0	2.450	2.073
180-189	98	0	0.0	3.278	2.595
190-300	89	2	12.391	6.092	4.133

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0278	0.0112	2.48
(2) MULTIVARIATE	0.0214	0.0131	1.63

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4387	21	1.000	1.000	1.000
74-109	252	1	0.828	0.158	0.247
110-119	555	0	0.0	0.230	0.337
120-129	804	0	0.0	0.325	0.446
130-139	837	2	0.498	0.471	0.603
140-149	649	1	0.321	0.676	0.809
150-159	458	3	1.371	0.975	1.089
160-169	310	4	2.718	1.380	1.445
170-179	201	1	1.040	1.977	1.936
180-189	130	3	4.911	2.785	2.558
190-300	191	6	6.743	7.811	5.659

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0365	0.0061	6.00
(2) MULTIVARIATE	0.0297	0.0069	4.30

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1393	7	1.000	1.000	1.000
74-109	67	0	0.0	0.320	0.171
110-119	123	1	1.623	0.416	0.246
120-129	198	0	0.0	0.505	0.325
130-139	257	1	0.773	0.642	0.456
140-149	230	1	0.865	0.796	0.619
150-159	173	1	1.151	0.986	0.838
160-169	120	1	1.664	1.220	1.132
170-179	71	0	0.0	1.525	1.554
180-189	57	0	0.0	1.928	2.166
190-300	97	2	4.168	3.477	5.287

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0223	0.0111	2.01
(2) MULTIVARIATE	0.0315	0.0133	2.38

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ATHEROTHROMBOTIC BRAIN INFARCTION
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY
BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
96-189	0	0	0.0	0.0	0.0
190-204	0	0	0.0	0.0	0.0
205-219	0	0	0.0	0.0	0.0
220-234	0	0	0.0	0.0	0.0
235-249	0	0	0.0	0.0	0.0
250-264	0	0	0.0	0.0	0.0
265-279	0	0	0.0	0.0	0.0
280-294	0	0	0.0	0.0	0.0
295-309	0	0	0.0	0.0	0.0
310-696	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5940	11	1.000	1.000	1.000
96-189	689	1	0.783	0.378	0.435
190-204	604	0	0.0	0.509	0.567
205-219	888	1	0.608	0.612	0.668
220-234	919	0	0.0	0.734	0.785
235-249	784	1	0.688	0.882	0.925
250-264	713	1	0.757	1.043	1.073
265-279	509	3	3.196	1.258	1.268
280-294	346	3	4.714	1.519	1.499
295-309	207	0	0.0	1.817	1.758
310-696	281	1	1.925	4.187	3.434

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0122	0.0035	3.49
(2) MULTIVARIATE	0.0108	0.0037	2.92

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4387	21	1.000	1.000	1.000
96-189	540	2	0.773	0.880	0.968
190-204	457	2	0.914	0.924	0.980
205-219	568	2	0.735	0.952	0.988
220-234	668	3	0.938	0.981	0.996
235-249	618	3	1.014	1.009	1.003
250-264	547	1	0.381	1.039	1.011
265-279	388	6	3.266	1.070	1.018
280-294	259	2	1.618	1.102	1.026
295-309	163	0	0.0	1.135	1.034
310-696	179	0	0.0	1.210	1.051

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0020	0.0052	0.38
(2) MULTIVARIATE	0.0005	0.0053	0.10

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1393	7	1.000	1.000	1.000
96-189	180	3	3.356	1.131	1.047
190-204	168	0	0.0	1.073	1.027
205-219	183	0	0.0	1.041	1.016
220-234	217	1	0.917	1.011	1.005
235-249	158	0	0.0	0.981	0.994
250-264	161	1	1.237	0.952	0.983
265-279	124	0	0.0	0.924	0.972
280-294	105	0	0.0	0.897	0.961
295-309	45	1	4.500	0.871	0.951
310-696	52	1	3.882	0.827	0.933

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0020	0.0093	-0.21
(2) MULTIVARIATE	-0.0007	0.0088	-0.08

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ATHEROTHROMBOTIC BRAIN INFARCTION
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NONE	0	0	0.0	0.0	0.0
UNDER 20	0	0	0.0	0.0	0.0
20	0	0	0.0	0.0	0.0
OVER 20	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5940	11	1.000	1.000	1.000
NONE	2200	1	0.245	0.390	0.372
UNDER 20	857	2	1.261	0.670	0.652
20	1429	3	1.134	1.149	1.146
OVER 20	1454	5	1.860	1.971	2.012

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.5396	0.2806	1.92
(2) MULTIVARIATE	0.5632	0.2944	1.91

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4387	21	1.000	1.000	1.000
NONE	2110	8	0.791	0.732	0.628
UNDER 20	730	2	0.571	0.948	0.904
20	861	6	1.459	1.229	1.300
OVER 20	686	5	1.526	1.592	1.869

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.2590	0.1826	1.42
(2) MULTIVARIATE	0.3635	0.1876	1.94

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1393	7	1.000	1.000	1.000
NONE	810	3	0.736	0.558	0.534
UNDER 20	274	0	0.0	0.971	0.958
20	187	2	2.141	1.690	1.720
OVER 20	122	2	3.300	2.941	3.088

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.5540	0.3189	1.74
(2) MULTIVARIATE	0.5852	0.3198	1.83

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ATHEROTHROMBOTIC BRAIN INFARCTION
CHARACTERISTIC: LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
POSSIBLE	0	0	0.0	0.0	0.0
DEFINITE	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5940	11	1.000	1.000	1.000
NO	5553	8	0.778	0.878	0.979
POSSIBLE	261	3	6.267	1.963	1.205
DEFINITE	126	0	0.0	4.391	1.483

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.8050	0.4855	1.66
(2) MULTIVARIATE	0.2073	0.6185	0.34

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4387	21	1.000	1.000	1.000
NO	3897	10	0.535	0.564	0.733
POSSIBLE	274	4	3.080	2.060	1.861
DEFINITE	216	7	6.963	7.520	4.726

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.2950	0.2387	5.42
(2) MULTIVARIATE	0.9319	0.2733	3.41

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1393	7	1.000	1.000	1.000
NO	1165	6	1.025	1.072	1.137
POSSIBLE	118	1	1.692	0.741	0.428
DEFINITE	110	0	0.0	0.512	0.161

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.3700	0.8404	-0.44
(2) MULTIVARIATE	-0.9771	0.9251	-1.06

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ATHEROTHROMBOTIC BRAIN INFARCTION
CHARACTERISTIC: GLUCOSE INTOLERANCE
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
YES	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5940	11	1.000	1.000	1.000
NO	5611	8	0.770	0.774	0.818
YES	329	3	4.960	4.857	4.105

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.8369	0.6792	2.70
(2) MULTIVARIATE	1.6132	0.7015	2.30

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4387	21	1.000	1.000	1.000
NO	4032	19	0.984	0.984	1.019
YES	355	2	1.178	1.184	0.788

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.1853	0.7454	0.25
(2) MULTIVARIATE	-0.2573	0.7664	-0.34

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
YES	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

TABLE 4A-2

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ATHEROTHROMBOTIC BRAIN INFARCTION
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
74-109	0	0	0.0	0.0	0.0
110-119	0	0	0.0	0.0	0.0
120-129	0	0	0.0	0.0	0.0
130-139	0	0	0.0	0.0	0.0
140-149	0	0	0.0	0.0	0.0
150-159	0	0	0.0	0.0	0.0
160-169	0	0	0.0	0.0	0.0
170-179	0	0	0.0	0.0	0.0
180-189	0	0	0.0	0.0	0.0
190-300	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7418	9	1.000	1.000	1.000
74-109	681	0	0.0	0.339	0.365
110-119	1284	1	0.642	0.456	0.484
120-129	1473	2	1.119	0.586	0.614
130-139	1445	0	0.0	0.755	0.781
140-149	916	1	0.900	0.978	0.999
150-159	635	2	2.601	1.254	1.263
160-169	374	0	0.0	1.615	1.606
170-179	241	0	0.0	2.083	2.045
180-189	176	1	4.704	2.682	2.599
190-300	193	2	8.620	7.128	6.455

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0256	0.0078	3.28
(2) MULTIVARIATE	0.0243	0.0079	3.06

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	21	1.000	1.000	1.000
74-109	212	0	0.0	0.184	0.383
110-119	518	0	0.0	0.254	0.471
120-129	765	0	0.0	0.337	0.563
130-139	937	3	0.871	0.448	0.675
140-149	834	2	0.652	0.597	0.810
150-159	772	3	1.058	0.796	0.971
160-169	559	1	0.486	1.057	1.162
170-179	405	3	2.025	1.404	1.392
180-189	298	0	0.0	1.861	1.665
190-300	418	9	5.970	4.886	2.859

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0289	0.0053	5.44
(2) MULTIVARIATE	0.0183	0.0061	2.99

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1893	11	1.000	1.000	1.000
74-109	35	0	0.0	0.265	0.607
110-119	104	0	0.0	0.341	0.674
120-129	158	1	1.090	0.418	0.733
130-139	255	0	0.0	0.529	0.807
140-149	303	0	0.0	0.651	0.880
150-159	284	1	0.605	0.810	0.962
160-169	232	3	2.241	0.999	1.049
170-179	183	1	0.940	1.243	1.147
180-189	136	2	2.554	1.557	1.258
190-300	203	3	2.566	2.705	1.556

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0221	0.0092	2.41
(2) MULTIVARIATE	0.0091	0.0107	0.85

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ATHEROTHROMBOTIC BRAIN INFARCTION
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
96-189	0	0	0.0	0.0	0.0
190-204	0	0	0.0	0.0	0.0
205-219	0	0	0.0	0.0	0.0
220-234	0	0	0.0	0.0	0.0
235-249	0	0	0.0	0.0	0.0
250-264	0	0	0.0	0.0	0.0
265-279	0	0	0.0	0.0	0.0
280-294	0	0	0.0	0.0	0.0
295-309	0	0	0.0	0.0	0.0
310-696	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	7418	9	1.000	1.000	1.000
96-189	746	1	1.105	0.691	0.784
190-204	726	0	0.0	0.773	0.847
205-219	899	1	0.917	0.833	0.891
220-234	1099	2	1.501	0.894	0.936
235-249	970	1	0.850	0.961	0.983
250-264	825	0	0.0	1.030	1.030
265-279	695	0	0.0	1.106	1.082
280-294	515	1	1.602	1.190	1.138
295-309	336	1	2.457	1.279	1.195
310-696	607	2	2.721	1.676	1.395

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0048	0.0036	1.34
(2) MULTIVARIATE	0.0033	0.0041	0.81

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5718	21	1.000	1.000	1.000
96-189	238	2	2.299	0.835	0.775
190-204	304	0	0.0	0.876	0.828
205-219	457	3	1.793	0.902	0.863
220-234	704	3	1.161	0.930	0.900
235-249	682	1	0.398	0.958	0.939
250-264	782	1	0.347	0.986	0.979
265-279	731	2	0.744	1.016	1.020
280-294	592	2	0.920	1.048	1.065
295-309	432	1	0.629	1.081	1.113
310-696	796	6	2.060	1.170	1.244

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0020	0.0046	0.44
(2) MULTIVARIATE	0.0028	0.0045	0.63

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	1893	11	1.000	1.000	1.000
96-189	53	0	0.0	0.430	0.488
190-204	78	1	2.222	0.534	0.588
205-219	136	0	0.0	0.601	0.651
220-234	205	0	0.0	0.678	0.723
235-249	248	1	0.693	0.770	0.806
250-264	255	1	0.674	0.867	0.893
265-279	262	1	0.656	0.983	0.994
280-294	199	1	0.864	1.121	1.113
295-309	157	4	4.473	1.265	1.235
310-696	300	2	1.148	1.722	1.604

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0084	0.0063	1.32
(2) MULTIVARIATE	0.0072	0.0059	1.22

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ATHEROTHROMBOTIC BRAIN INFARCTION
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NONE	0	0	0.0	0.0	0.0
UNDER 20	0	0	0.0	0.0	0.0
20	0	0	0.0	0.0	0.0
OVER 20	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	21	1.000	1.000	1.000
NONE	4101	17	1.129	1.029	0.991
UNDER 20	1001	0	0.0	0.959	1.012
20	427	4	2.565	0.895	1.033
OVER 20	189	0	0.0	0.834	1.055

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0698	0.2995	-0.23
(2) MULTIVARIATE	0.0210	0.2958	0.07

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7418	9	1.000	1.000	1.000
NONE	4183	7	1.380	1.322	1.273
UNDER 20	1782	1	0.462	0.753	0.804
20	1043	1	0.790	0.429	0.508
OVER 20	410	0	0.0	0.244	0.321

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.5631	0.5161	-1.09
(2) MULTIVARIATE	-0.4595	0.5115	-0.90

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1893	11	1.000	1.000	1.000
NONE	1521	10	1.132	1.156	1.150
UNDER 20	263	1	0.653	0.449	0.478
20	81	0	0.0	0.175	0.199
OVER 20	28	0	0.0	0.068	0.083

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.9450	0.9230	-1.02
(2) MULTIVARIATE	-0.8774	0.9317	-0.94

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ATHEROTHROMBOTIC BRAIN INFARCTION
CHARACTERISTIC: LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
POSSIBLE	0	0	0.0	0.0	0.0
DEFINITE	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
POSSIBLE	0	0	0.0	0.0	0.0
DEFINITE	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	21	1.000	1.000	1.000
NO	5178	11	0.578	0.572	0.748
POSSIBLE	334	3	2.459	2.342	2.051
DEFINITE	206	7	9.543	9.594	5.622

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.4102	0.2421	5.82
(2) MULTIVARIATE	1.0083	0.2935	3.44

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1393	11	1.000	1.000	1.000
NO	1619	5	0.530	0.532	0.648
POSSIBLE	159	3	3.290	1.848	1.779
DEFINITE	115	3	4.583	6.418	4.885

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.2451	0.3189	3.90
(2) MULTIVARIATE	1.0104	0.3791	2.67

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ATHEROTHROMBOTIC BRAIN INFARCTION
CHARACTERISTIC: GLUCOSE INTOLERANCE
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
YES	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7418	9	1.000	1.000	1.000
NO	7182	8	0.918	0.920	0.947
YES	236	1	3.503	3.423	2.603

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.3136	1.0625	1.24
(2) MULTIVARIATE	1.0108	1.1030	0.92

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	21	1.000	1.000	1.000
NO	5363	18	0.914	0.914	0.976
YES	355	3	2.312	2.293	1.355

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.9194	0.6259	1.47
(2) MULTIVARIATE	0.3277	0.6506	0.50

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1893	11	1.000	1.000	1.000
NO	1711	9	0.905	0.827	0.992
YES	182	2	1.901	2.628	1.080

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.1565	0.6712	1.72
(2) MULTIVARIATE	0.0853	0.8564	0.10

TABLE 5A

RELATIVE AVERAGE ODDS FOR INTERMITTENT CLAUDICATION

Men (Table 5A-1)
Women (Table 5A-2)

TABLE 5A-1

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: INTERMITTENT CLAUDICATION
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
74-109	0	0	0.0	0.0	0.0
110-119	0	0	0.0	0.0	0.0
120-129	0	0	0.0	0.0	0.0
130-139	0	0	0.0	0.0	0.0
140-149	0	0	0.0	0.0	0.0
150-159	0	0	0.0	0.0	0.0
160-169	0	0	0.0	0.0	0.0
170-179	0	0	0.0	0.0	0.0
180-189	0	0	0.0	0.0	0.0
190-300	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5921	20	1.000	1.000	1.000
74-109	372	0	0.0	0.701	0.848
110-119	1006	4	1.178	0.790	0.898
120-129	1287	3	0.689	0.874	0.943
130-139	1271	2	0.465	0.974	0.994
140-149	844	6	2.113	1.085	1.047
150-159	524	3	1.699	1.208	1.103
160-169	272	1	1.089	1.342	1.160
170-179	156	0	0.0	1.491	1.221
180-189	97	1	3.073	1.672	1.290
190-300	92	0	0.0	2.106	1.440

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0109	0.0101	1.08
(2) MULTIVARIATE	0.0053	0.0106	0.50

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4359	45	1.000	1.000	1.000
74-109	252	2	0.767	0.562	0.586
110-119	547	5	0.884	0.653	0.674
120-129	802	3	0.360	0.745	0.763
130-139	830	5	0.581	0.861	0.873
140-149	638	9	1.372	0.989	0.994
150-159	447	8	1.747	1.140	1.136
160-169	312	4	1.245	1.304	1.287
170-179	202	2	0.959	1.499	1.467
180-189	131	4	3.019	1.712	1.661
190-300	198	3	1.475	2.391	2.267

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0141	0.0051	2.75
(2) MULTIVARIATE	0.0132	0.0056	2.34

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1317	15	1.000	1.000	1.000
74-109	64	2	2.800	1.556	1.810
110-119	115	2	1.536	1.352	1.488
120-129	185	2	0.949	1.223	1.297
130-139	252	3	1.046	1.083	1.096
140-149	216	3	1.223	0.969	0.940
150-159	171	0	0.0	0.868	0.807
160-169	109	1	0.804	0.779	0.695
170-179	68	0	0.0	0.696	0.595
180-189	53	0	0.0	0.617	0.504
190-300	84	2	2.117	0.477	0.356

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0114	0.0113	-1.01
(2) MULTIVARIATE	-0.0157	0.0119	-1.33

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: INTERMITTENT CLAUDICATION
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
96-189	0	0	0.0	0.0	0.0
190-204	0	0	0.0	0.0	0.0
205-219	0	0	0.0	0.0	0.0
220-234	0	0	0.0	0.0	0.0
235-249	0	0	0.0	0.0	0.0
250-264	0	0	0.0	0.0	0.0
265-279	0	0	0.0	0.0	0.0
280-294	0	0	0.0	0.0	0.0
295-309	0	0	0.0	0.0	0.0
310-696	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5921	20	1.000	1.000	1.000
96-189	688	1	0.429	0.554	0.607
190-204	603	3	1.475	0.678	0.723
205-219	882	3	1.007	0.767	0.804
220-234	916	3	0.969	0.868	0.894
235-249	788	1	0.375	0.982	0.995
250-264	709	2	0.835	1.099	1.096
265-279	509	0	0.0	1.247	1.222
280-294	348	2	1.705	1.416	1.363
295-309	203	1	1.461	1.598	1.512
310-696	275	4	4.355	2.380	2.089

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0082	0.0038	2.18
(2) MULTIVARIATE	0.0071	0.0037	1.91

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4359	45	1.000	1.000	1.000
96-189	533	3	0.543	0.548	0.590
190-204	456	2	0.422	0.675	0.711
205-219	569	6	1.022	0.767	0.796
220-234	659	6	0.881	0.875	0.894
235-249	615	6	0.944	0.983	0.996
250-264	551	4	0.701	1.121	1.115
265-279	388	5	1.252	1.272	1.247
280-294	256	7	2.695	1.449	1.400
295-309	156	3	1.880	1.643	1.566
310-696	176	3	1.662	2.276	2.071

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0085	0.0031	2.74
(2) MULTIVARIATE	0.0076	0.0032	2.40

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1317	15	1.000	1.000	1.000
96-189	163	3	1.627	1.245	1.297
190-204	154	1	0.567	1.129	1.153
205-219	174	3	1.523	1.071	1.083
220-234	210	2	0.835	1.017	1.018
235-249	149	2	1.181	0.965	0.956
250-264	152	0	0.0	0.915	0.897
265-279	120	0	0.0	0.868	0.842
280-294	102	3	2.630	0.824	0.791
295-309	41	0	0.0	0.782	0.743
310-696	52	1	1.702	0.716	0.669

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0035	0.0064	-0.55
(2) MULTIVARIATE	-0.0042	0.0065	-0.65

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: INTERMITTENT CLAUDICATION
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NONE	0	0	0.0	0.0	0.0
UNDER 20	0	0	0.0	0.0	0.0
20	0	0	0.0	0.0	0.0
OVER 20	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5921	20	1.000	1.000	1.000
NONE	2199	3	0.403	0.610	0.611
UNDER 20	854	3	1.040	0.833	0.834
20	1419	9	1.883	1.138	1.138
OVER 20	1449	5	1.022	1.555	1.553

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.3122	0.1909	1.64
(2) MULTIVARIATE	0.3112	0.1938	1.61

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4359	45	1.000	1.000	1.000
NONE	2117	12	0.547	0.543	0.472
UNDER 20	724	9	1.207	0.859	0.811
20	859	7	0.788	1.360	1.393
OVER 20	659	17	2.539	2.154	2.391

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4596	0.1266	3.63
(2) MULTIVARIATE	0.5406	0.1304	4.15

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1317	15	1.000	1.000	1.000
NONE	790	7	0.776	0.974	0.971
UNDER 20	254	5	1.743	1.011	1.012
20	167	3	1.588	1.050	1.055
OVER 20	106	0	0.0	1.090	1.099

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0375	0.2586	0.15
(2) MULTIVARIATE	0.0412	0.2652	0.16

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: INTERMITTENT CLAUDICATION
CHARACTERISTIC: LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
POSSIBLE	0	0	0.0	0.0	0.0
DEFINITE	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5921	20	1.000	1.000	1.000
NO	5544	16	0.854	0.923	0.951
POSSIBLE	252	4	4.759	1.679	1.462
DEFINITE	125	0	0.0	3.054	2.247

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.5984	0.4160	1.44
(2) MULTIVARIATE	0.4300	0.4637	C.93

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4359	45	1.000	1.000	1.000
NO	3857	38	0.954	0.903	0.990
POSSIBLE	285	2	0.678	1.407	1.052
DEFINITE	217	5	2.261	2.191	1.118

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4434	0.2279	1.95
(2) MULTIVARIATE	0.0611	0.2647	0.23

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1317	15	1.000	1.000	1.000
NO	1106	12	0.952	0.933	0.853
POSSIBLE	107	1	0.819	1.191	1.366
DEFINITE	104	2	1.702	1.521	2.187

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.2446	0.3839	C.64
(2) MULTIVARIATE	0.4706	0.4158	1.13

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                              RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
                             OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

                         EVENT:  INTERMITTENT CLAUDICATION
                CHARACTERISTIC:  GLUCOSE INTOLERANCE
             CONTROL VARIABLES:  SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
                                 LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

                   MEN AGED 35-44 AT EXAM                                             MEN AGED 45-54 AT EXAM

                NUMBER          RELATIVE AVERAGE ODDS                             NUMBER          RELATIVE AVERAGE ODDS
   LEVEL     AT RISK   CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2            LEVEL    AT RISK   CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2

     TOTAL        0       0     0.0       0.0        0.0                   TOTAL    5921      20    1.000      1.000       1.000

   NO             0       0     0.0       0.0        0.0                 NO         5607      16    0.844      0.848       0.860
   YES            0       0     0.0       0.0        0.0                 YES         314       4    3.807      3.710       3.497

                     B      SE(B)   B/SE(B)                                              B      SE(B)   B/SE(B)

 (1) UNIVARIATE    0.0      0.0      0.0                             (1) UNIVARIATE    1.4757  0.5618   2.63
 (2) MULTIVARIATE  0.0      0.0      0.0                             (2) MULTIVARIATE  1.4024  0.5690   2.46

                   MEN AGED 55-64 AT EXAM                                             MEN AGED 65-74 AT EXAM

                NUMBER          RELATIVE AVERAGE ODDS                             NUMBER          RELATIVE AVERAGE ODDS
   LEVEL     AT RISK   CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2            LEVEL    AT RISK   CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2

     TOTAL     4359      45     1.000     1.000      1.000                 TOTAL    1317      15    1.00C      1.000       1.000

   NO          4019      33     0.794     0.795      0.772               NO         1196      14    1.028      1.027       1.025
   YES          340      12     3.507     3.425      3.693               YES         121       1    0.723      0.728       0.750

                     B      SE(B)   B/SE(B)                                              B      SE(B)   B/SE(B)

 (1) UNIVARIATE    1.4607  0.3405   4.29                             (1) UNIVARIATE   -0.3440  1.0395  -0.33
 (2) MULTIVARIATE  1.5651  0.3554   4.40                             (2) MULTIVARIATE -0.3121  1.0420  -0.30
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RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: INTERMITTENT CLAUDICATION
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
74-109	0	0	0.0	0.0	0.0
110-119	0	0	0.0	0.0	0.0
120-129	0	0	0.0	0.0	0.0
130-139	0	0	0.0	0.0	0.0
140-149	0	0	0.0	0.0	0.0
150-159	0	0	0.0	0.0	0.0
160-169	0	0	0.0	0.0	0.0
170-179	0	0	0.0	0.0	0.0
180-189	0	0	0.0	0.0	0.0
190-300	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7438	5	1.00C	1.000	1.000
74-109	683	1	2.180	0.265	0.393
110-119	1287	0	0.0	0.373	0.513
120-129	1471	1	1.011	0.498	0.641
130-139	1446	0	0.0	0.667	0.804
140-149	918	1	1.621	0.899	1.014
150-159	638	0	0.0	1.198	1.267
160-169	379	0	0.0	1.605	1.589
170-179	242	1	6.168	2.151	1.995
180-189	177	0	0.0	2.876	2.499
190-300	197	1	7.585	9.398	5.768

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0295	0.0086	3.44
(2) MULTIVARIATE	0.0229	0.0124	1.85

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5735	21	1.000	1.000	1.000
74-109	217	1	1.260	0.398	0.639
110-119	518	1	0.526	0.486	0.710
120-129	763	1	0.357	0.578	0.777
130-139	932	2	0.585	0.687	0.852
140-149	836	2	0.653	0.820	0.934
150-159	773	3	1.060	0.977	1.024
160-169	560	2	0.975	1.160	1.121
170-179	408	3	2.016	1.381	1.229
180-189	309	3	2.676	1.638	1.344
190-300	420	3	1.958	2.755	1.728

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0176	0.0060	2.93
(2) MULTIVARIATE	0.0093	0.0071	1.30

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1897	12	1.00C	1.000	1.000
74-109	35	0	0.0	0.305	0.399
110-119	102	0	0.0	0.383	0.479
120-129	158	0	0.0	0.460	0.553
130-139	253	0	0.0	0.569	0.656
140-149	298	3	1.597	0.687	0.762
150-159	279	2	1.134	0.837	0.892
160-169	242	2	1.309	1.011	1.037
170-179	185	0	0.0	1.233	1.214
180-189	138	1	1.147	1.508	1.425
190-300	207	4	3.095	2.471	2.092

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0199	0.0093	2.15
(2) MULTIVARIATE	0.0159	0.0101	1.56

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: INTERMITTENT CLAUDICATION
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY
BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
96-189	0	0	0.0	0.0	0.0
190-204	0	0	0.0	0.0	0.0
205-219	0	0	0.0	0.0	0.0
220-234	0	0	0.0	0.0	0.0
235-249	0	0	0.0	0.0	0.0
250-264	0	0	0.0	0.0	0.0
265-279	0	0	0.0	0.0	0.0
280-294	0	0	0.0	0.0	0.0
295-309	0	0	0.0	0.0	0.0
310-696	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7438	5	1.000	1.000	1.000
96-189	748	0	0.0	0.506	0.392
190-204	730	0	0.0	0.603	0.480
205-219	903	0	0.0	0.677	0.548
220-234	1107	0	0.0	0.757	0.624
235-249	971	0	0.0	0.847	0.711
250-264	825	0	0.0	0.943	0.806
265-279	695	2	4.290	1.055	0.917
280-294	520	1	2.864	1.184	1.048
295-309	335	0	0.0	1.325	1.195
310-696	604	2	4.939	2.942	4.422

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0075	0.0024	3.10
(2) MULTIVARIATE	0.0087	0.0027	3.28

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5735	21	1.000	1.000	1.000
96-189	243	0	0.0	0.522	0.549
190-204	308	0	0.0	0.614	0.639
205-219	460	2	1.188	0.679	0.701
220-234	708	2	0.771	0.752	0.771
235-249	683	1	0.399	0.834	0.848
250-264	788	5	1.738	0.921	0.930
265-279	734	4	1.491	1.019	1.022
280-294	591	1	0.461	1.132	1.126
295-309	433	1	0.630	1.259	1.243
310-696	787	5	1.740	1.674	1.615

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0069	0.0043	1.61
(2) MULTIVARIATE	0.0064	0.0041	1.57

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1897	12	1.000	1.000	1.000
96-189	58	0	0.0	0.887	0.805
190-204	81	2	3.977	0.920	0.859
205-219	137	0	0.0	0.937	0.887
220-234	214	1	0.737	0.954	0.916
235-249	246	1	0.641	0.972	0.948
250-264	255	1	0.618	0.989	0.978
265-279	265	1	0.595	1.008	1.012
280-294	200	2	1.587	1.028	1.049
295-309	150	2	2.123	1.046	1.083
310-696	291	2	1.087	1.091	1.169

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0012	0.0065	0.19
(2) MULTIVARIATE	0.0022	0.0060	0.37

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: INTERMITTENT CLAUDICATION
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NONE	0	0	0.0	0.0	0.0
UNDER 20	0	0	0.0	0.0	0.0
20	0	0	0.0	0.0	0.0
OVER 20	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7438	5	1.000	1.000	1.000
NONE	4189	2	0.710	0.636	0.413
UNDER 20	1791	0	0.0	1.039	0.923
20	1048	2	2.842	1.696	2.064
OVER 20	410	1	3.635	2.767	4.616

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4899	0.3777	1.30
(2) MULTIVARIATE	0.8047	0.4075	1.97

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5735	21	1.000	1.000	1.000
NONE	4118	14	0.928	0.900	0.824
UNDER 20	998	4	1.095	1.115	1.174
20	430	0	0.0	1.381	1.672
OVER 20	189	3	4.389	1.710	2.382

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.2141	0.2356	0.91
(2) MULTIVARIATE	0.3538	0.2398	1.48

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1897	12	1.000	1.000	1.000
NONE	1537	6	0.616	0.756	0.699
UNDER 20	255	5	3.142	1.458	1.507
20	79	0	0.0	2.810	3.249
OVER 20	26	1	6.283	5.416	7.005

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.6562	0.3031	2.16
(2) MULTIVARIATE	0.7683	0.3196	2.40

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: INTERMITTENT CLAUDICATION
CHARACTERISTIC: LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
POSSIBLE	0	0	0.0	0.0	0.0
DEFINITE	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7438	5	1.000	1.000	1.000
NO	7187	4	0.828	0.825	0.908
POSSIBLE	187	0	0.0	3.365	2.513
DEFINITE	64	1	23.597	13.724	6.959

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.4057	0.5951	2.36
(2) MULTIVARIATE	1.0185	0.7765	1.31

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5735	21	1.000	1.000	1.000
NO	5184	16	0.842	0.745	0.898
POSSIBLE	340	1	0.803	2.039	1.539
DEFINITE	211	4	5.258	5.580	2.639

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.0065	0.2600	3.87
(2) MULTIVARIATE	0.5390	0.3341	1.61

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1897	12	1.000	1.000	1.000
NO	1615	7	0.684	0.692	0.814
POSSIBLE	163	2	1.951	1.707	1.514
DEFINITE	119	3	4.063	4.210	2.816

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.9028	0.3377	2.67
(2) MULTIVARIATE	0.6205	0.3887	1.60

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: INTERMITTENT CLAUDICATION
CHARACTERISTIC: GLUCOSE INTOLERANCE
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
YES	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5735	21	1.000	1.000	1.000
NO	5377	14	0.710	0.740	0.756
YES	358	7	5.426	4.900	4.658

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.8900	0.4563	4.14
(2) MULTIVARIATE	1.8178	0.4852	3.75

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
YES	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1897	12	1.000	1.000	1.000
NO	1713	9	0.830	0.829	0.899
YES	184	3	2.604	2.594	1.945

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.1412	0.6712	1.70
(2) MULTIVARIATE	0.7721	0.6963	1.11

APPENDIX B

PROBABILITY OF DEVELOPING CHD

(By sex and length of followup at various ages and various levels of Systolic Blood Pressure, Serum Cholesterol, and the presence or absence of Cigarette Smoking, Glucose Intolerance and LVH-ECG)

In Two Years 1B
In Four Years 2B
In Six Years 3B
In Eight Years 4B

PROBABILITY TABLES

These tables contain estimates of the probability of developing coronary heart disease (CHD) at specific values of systolic blood pressure, serum cholesterol, cigarette smoking, glucose intolerance and left ventricular hypertrophy by electrocardiogram; for a specific age and sex; and for a specific length of followup. The tables enable the assignment of an (estimated) approximate probability of developing CHD to any individual between 35 and 70 years of age who has all of the characteristics listed above.

The characteristics are measured as follows: systolic blood pressure in mm of Hg; serum cholesterol in mg/100 ml; cigarette smoking as smokes or does not smoke cigarettes; glucose intolerance present is either a diagnosis of diabetes, a blood sugar equal to or greater than 120 mg/100 ml, or a trace or more of urine sugar; and left ventricular hypertrophy by electrocardiogram positive is defined as a definite diagnosis of LVH-ECG. The tabulated values for the continuous variable systolic blood pressure range from 105 to 180 mm Hg by intervals of 15. The variable serum cholesterol ranges from 185 to 310 mg/100 ml in intervals of 25.

At the bottom of each table, the average values of each characteristic for the Framingham population at the specified age group are presented. At the given average values the probability of developing CHD is calculated and shown. This "average" probability can be used to set in perspective the corresponding tabulated probabilities.

These tables also show the probability of developing CHD in 2 years, 4 years, 6 years, and 8 years. It would be expected that for the longer period of followup the probabilities would be greater than for the shorter period. However, there are no constraints on the statistical models that were used that would require this to be true. Thus inconsistencies could arise in the results, and in fact do arise between the four and six year followup in women. For a few of the sets of characteristics the probabilities for the four years are greater than for the six. These are noted on the tables. There are, without doubt, other inconsistencies in the fact that while the difference in probabilities between the lengths of followup are of correct sign they are not of the correct magnitude. To avoid this problem a model would have to be constructed which would have the above constraints incorporated into the model itself. Such a model, however, is not yet available.

As the length of followup increases, the gradient of risk should decrease. In Table 1 the gradient is roughly measured by dividing the probability at the combination of characteristics which gives the highest probability by the probability at the lowest combination. This table shows that for most ages this gradient does decrease with increasing length of followup. The apparent age shift of this gradient arises from shifts in the distribution of characteristics. Where distribution differences are allowed for (as in text Table 17) no age differences in risk gradient is evidenced.

The tables were constructed by the evaluation of the probability function $P = 1/1 + e^{-\alpha-\Sigma\beta_i x_i}$ where the coefficients α and β_i were estimated by the Duncan-Walker procedure. The independent variables, x_i, are age, age squared, serum cholesterol, systolic blood pressure, cigarette smoking, glucose intolerance, left ventricular hypertrophy by electrocardiogram and the product cholesterol times ages. Introducing age as an independent variable allows the estimation of coefficients to be made over the age span 35-74 years. A complete set of coefficients was estimated for each length of followup. The coefficients appear in Table 2.

As an example of the use of the tables, a man aged 40, who does not smoke cigarettes, has normal glucose intolerance and LVH-ECG, has a systolic blood pressure of 165 and a cholesterol of 285 will have a probability of developing CHD in 2 years of 8/1000. A man his age with average characteristics has a probability of 5/1000. The same man who now smokes cigarettes will have a probability of 14/1000. These values come directly from the tabled values. Interpolation can be used to obtain probabilities for a person whose values are not those exactly shown on the tables.

TABLE i. Probability, per 1,000, of developing Coronary Heart Disease at lowest and highest combination of risk factors at varying levels of followup by age and sex: Framingham Study, 16-year followup.

	Two year		Four year		Six year		Eight year	
	High/Low	Ratio	High/Low	Ratio	High/Low	Ratio	High/Low	Ratio
Men								
35	39/ 1	39	95/ 1	95	169/ 3	56	200/ 4	50
40	81/ 2	41	177/ 3	59	266/ 7	38	318/10	32
45	141/ 4	35	272/ 7	39	358/15	24	425/20	21
50	205/ 7	29	355/14	25	427/25	17	501/34	15
55	255/11	23	409/22	19	463/37	13	537/50	11
60	277/15	18	425/29	15	463/48	10	534/62	9
65	267/17	16	401/34	12	428/53	8	491/67	7
70	226/16	14	341/33	10	360/52	7	410/62	7
Women								
45	20/ 1	20	40/ 3	13	89/ 4	22	111/ 7	16
50	39/ 2	20	75/ 6	13	133/ 8	17	171/13	13
55	65/ 3	22	119/10	12	180/13	14	235/22	11
60	94/ 5	19	163/14	12	223/18	12	291/32	9
65	117/ 6	20	195/17	11	257/25	10	331/43	8
70	129/ 7	18	206/19	11	277/31	9	350/51	7

NOTE: High means that a person has a systolic blood pressure of 180; serum cholesterol of 310; smokes cigarettes, has a positive LVH-ECG; and suffers from glucose intolerance. Low means that a person has a systolic blood pressure of 105; serum cholestorol of 185; does not smoke cigarettes; has a negative LVH-ECG; and has no impairment of glucose tolerance.

TABLE ii. Coefficients of the risk function (risk of Coronary Heart Disease) estimated by the Duncan-Walker procedure for specified lengths of followup: Framingham Study, 16-year followup.

Followup period	Intercept	Age	Age x Age	CHOL	SBP	CIGS	LVH-ECG	GL INT	CHOLxAGE
MEN									
2 year	-24.386803	.506622	-.003357	.023038	.010494	.550991	.883188	.510296	-.000315
4 year	-24.234495	.505829	-.003239	.027597	.011881	.539574	.929929	.295058	-.000388
6 year	-22.227532	.460575	-.002882	.028590	.012444	.447815	.743158	.265016	-.000416
8 year	-22.409352	.485473	-.003167	.027176	.013061	.485650	.749631	.229286	-.000399
WOMEN									
2 year	-22.540645	.414243	-.002898	.006707	.015240	.120011	.804878	.192995	-.000005
4 year	-20.764811	.416108	-.002980	.004741	.013331	.066718	.737766	.217187	.000000
6 year	-19.066572	.311558	-.001724	.016802	.015278	.049966	.441707	.416906	-.000190
8 year	-19.309406	.354913	-.002093	.015194	.012634	.034627	.431370	.556614	-.000180

TABLE 1B

PROBABILITY OF DEVELOPING CHD IN TWO YEARS

Men (Table 1B-1)
Women (Table 1B-2)

TABLE 18-1

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

35 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	1	1	1	1	1	1	1	1	1	2	2	2
	210	1	1	1	1	1	2	1	2	2	2	3	3
	235	1	1	1	2	2	2	2	2	3	3	3	4
	260	1	2	2	2	3	3	2	3	3	4	5	5
	285	2	2	3	3	4	4	3	4	5	5	6	7
	310	3	3	4	4	5	6	5	5	6	7	8	10
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	1	1	1	2	2	2	2	2	2	3	3	4
	210	1	2	2	2	2	3	2	3	3	4	4	5
	235	2	2	2	3	3	4	3	4	4	5	6	7
	260	2	3	3	4	4	5	4	5	6	7	8	9
	285	3	4	4	5	6	7	6	7	8	9	10	12
	310	4	5	6	7	8	10	8	9	10	12	14	16

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	1	2	2	2	3	3	2	3	3	4	5	5
	210	2	2	3	3	4	4	3	4	5	5	6	7
	235	3	3	4	4	5	6	4	5	6	7	8	10
	260	3	4	5	6	7	8	6	7	8	10	11	13
	285	5	5	6	7	9	10	8	9	11	13	15	18
	310	6	7	9	10	12	14	11	13	15	17	20	24
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	2	3	3	4	4	5	4	5	6	7	8	9
	210	3	4	4	5	6	7	5	6	8	9	10	12
	235	4	5	6	7	8	9	7	9	10	12	14	16
	260	6	7	8	9	11	13	10	12	14	16	19	22
	285	8	9	11	12	15	17	13	16	18	21	25	29
	310	10	12	14	17	19	23	18	21	25	29	33	39

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 35 YRS HAVE AN AVERAGE SBP OF 128 MM HG AND AN AVERAGE SERUM CHOL OF 221 MG%. 70 PERCENT SMOKE CIGARETTES, 0.0 PERCENT HAVE DEFINITE LVH BY ECG AND 2.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS IS 2/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

40 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	2	2	2	3	3	3	3	3	4	4	5	6
	210	2	2	3	3	4	4	4	4	5	6	7	8
	235	3	3	4	4	5	6	5	5	6	7	9	10
	260	3	4	5	5	6	7	6	7	8	9	11	13
	285	4	5	6	7	8	10	8	9	10	12	14	17
	310	6	7	8	9	11	13	10	12	14	16	18	22
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	3	3	4	4	5	6	5	5	6	7	8	10
	210	3	4	5	5	6	7	6	7	8	9	11	13
	235	4	5	6	7	8	10	8	9	10	12	14	16
	260	6	7	8	9	11	12	10	11	13	16	18	21
	285	7	9	10	12	14	16	13	15	17	20	24	27
	310	10	11	13	15	18	21	16	19	22	26	30	35

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	4	4	5	6	7	8	7	8	9	10	12	14
	210	5	6	7	8	9	11	8	10	12	13	16	18
	235	6	7	9	10	12	14	11	13	15	17	20	24
	260	8	10	11	13	15	18	14	17	19	23	26	31
	285	11	12	15	17	20	23	18	21	25	29	34	39
	310	14	16	19	22	26	30	24	28	32	37	43	50
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	6	7	9	10	12	14	11	13	15	17	20	23
	210	8	9	11	13	15	18	14	16	19	22	26	30
	235	11	12	14	17	20	23	18	21	25	29	33	39
	260	14	16	19	22	25	29	23	27	32	37	43	50
	285	18	21	24	28	33	38	30	35	41	47	55	64
	310	23	26	31	36	42	49	39	45	52	61	70	81

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 40 YRS HAVE AN AVERAGE SBP OF 129 MM HG AND AN AVERAGE SERUM CHOL OF 229 MG%. 69 PERCENT SMOKE CIGARETTES, 0.6 PERCENT HAVE DEFINITE LVH BY ECG AND 2.6 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS IS 5/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

45 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	4	4	5	6	7	8	6	7	8	10	11	13
	210	4	5	6	7	8	10	8	9	10	12	14	17
	235	5	6	7	9	10	12	9	11	13	15	18	21
	260	7	8	9	11	13	15	12	14	16	19	22	26
	285	9	10	12	14	16	18	15	17	20	23	27	32
	310	11	12	14	17	20	23	18	21	25	29	34	39
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	6	7	8	9	11	13	10	12	14	16	19	22
	210	7	9	10	12	14	16	13	15	17	20	23	27
	235	9	11	12	14	17	20	16	18	21	25	29	34
	260	11	13	15	18	21	25	19	23	26	31	36	42
	285	14	16	19	22	26	30	24	28	33	38	44	52
	310	18	20	24	28	32	38	30	35	41	47	55	64

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	8	10	12	14	16	18	15	17	20	23	27	32
	210	11	12	14	17	20	23	18	21	25	29	34	39
	235	13	15	18	21	24	28	23	26	31	36	42	48
	260	16	19	22	26	30	35	28	33	38	44	51	60
	285	20	24	28	32	37	44	35	40	47	55	63	73
	310	25	29	34	40	46	54	43	50	58	67	78	90
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	14	16	19	22	26	30	24	28	33	38	44	51
	210	17	20	24	28	32	38	30	35	41	47	55	63
	235	22	25	29	34	40	46	37	43	50	58	67	78
	260	27	31	37	42	49	57	46	53	62	72	83	95
	285	33	39	45	52	61	71	57	66	76	88	101	116
	310	41	48	56	65	75	87	70	81	93	107	123	141

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 45 YRS HAVE AN AVERAGE SBP OF 131 MM HG AND AN AVERAGE SERUM CHOL OF 235 MG%. 67 PERCENT SMOKE CIGARETTES, 1.3 PERCENT HAVE DEFINITE LVH BY ECG AND 3.8 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS IS 11/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

50 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	7	8	9	11	13	15	12	14	16	18	22	25
	210	8	9	11	13	15	17	14	16	19	22	26	30
	235	10	11	13	15	18	21	17	19	23	26	31	36
	260	12	13	16	18	21	25	20	23	27	31	37	43
	285	14	16	19	22	26	30	24	28	32	37	44	51
	310	17	19	22	26	31	36	28	33	38	45	52	60
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	11	13	15	18	21	24	19	22	26	30	35	41
	210	13	16	18	21	25	29	23	27	31	36	42	49
	235	16	19	22	25	29	34	27	32	37	43	50	58
	260	19	22	26	30	35	41	33	38	44	51	59	69
	285	23	27	31	36	42	49	39	45	52	61	71	82
	310	27	32	37	43	50	58	46	54	62	72	83	96

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	16	19	22	26	30	35	28	32	37	43	50	59
	210	19	22	26	30	35	41	33	38	44	52	60	69
	235	23	27	31	36	42	49	39	46	53	61	71	82
	260	27	32	37	43	50	58	47	54	63	73	84	97
	285	33	38	44	51	60	69	55	64	74	86	99	114
	310	39	45	53	61	71	82	66	76	88	101	117	134
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	26	31	36	42	49	56	45	52	61	70	81	94
	210	32	37	43	50	58	67	54	62	72	83	96	111
	235	38	44	51	59	68	79	64	74	85	98	113	130
	260	45	52	60	70	81	94	75	87	100	116	133	152
	285	53	62	72	83	96	110	89	103	118	136	155	177
	310	63	73	85	98	113	129	105	121	138	158	180	205

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 50 YRS HAVE AN AVERAGE SBP OF 134 MM HG AND AN AVERAGE SERUM CHOL OF 236 MG%. 62 PERCENT SMOKE CIGARETTES, 2.1 PERCENT HAVE DEFINITE LVH BY ECG AND 6.3 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS IS 19/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

55 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP CHOL	105	120	135	150	165	180	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	11	13	15	17	20	23	19	22	25	29	34	40
	210	12	15	17	20	23	27	21	25	29	34	39	46
	235	14	17	19	23	27	31	25	29	33	39	45	52
	260	16	19	22	26	30	35	28	33	38	44	52	60
	285	19	22	26	30	35	41	32	38	44	51	59	69
	310	22	25	30	34	40	47	37	43	50	58	68	78
	SBP CHOL	105	120	135	150	165	180	105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	18	21	24	28	33	38	31	36	41	48	56	65
	210	21	24	28	33	38	44	35	41	47	55	64	74
	235	24	28	32	37	43	50	40	47	54	63	73	84
	260	27	32	37	43	50	58	46	54	62	72	83	96
	285	31	36	42	49	57	66	53	61	71	82	95	109
	310	36	42	48	56	65	75	60	70	81	94	108	124

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP CHOL	105	120	135	150	165	180	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	26	30	35	41	47	55	44	51	59	68	79	91
	210	30	34	40	47	54	63	50	58	67	78	90	104
	235	34	39	46	53	62	72	57	67	77	89	103	118
	260	39	45	53	61	71	82	66	76	88	101	116	134
	285	45	52	60	70	81	93	75	87	100	115	132	151
	310	51	59	69	79	92	106	85	99	113	130	149	170
	SBP CHOL	105	120	135	150	165	180	105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	42	49	57	66	76	88	71	82	95	109	125	143
	210	48	56	65	75	87	100	81	93	107	124	142	162
	235	55	64	74	86	99	114	92	106	122	140	160	182
	260	63	73	85	98	112	129	105	120	138	158	180	204
	285	72	83	96	111	127	146	119	136	156	178	202	229
	310	82	95	109	126	144	165	135	154	176	200	226	255

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 55 YRS HAVE AN AVERAGE SBP OF 138 MM HG AND AN AVERAGE SERUM CHOL OF 235 MG%. 57 PERCENT SMOKE CIGARETTES, 3.7 PERCENT HAVE DEFINITE LVH BY ECG AND 7.3 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS IS 29/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

60 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	15	17	20	23	27	32	25	29	34	40	46	54
	210	16	19	22	26	30	35	28	32	38	44	51	59
	235	18	21	24	29	33	39	31	36	42	48	56	65
	260	20	23	27	32	37	43	34	40	46	53	62	72
	285	22	26	30	35	41	47	38	44	51	59	68	79
	310	24	28	33	39	45	52	42	48	56	65	75	87
GLUCOSE INTOLERANCE PRESENT	185	24	28	33	38	44	52	41	48	56	65	75	86
	210	27	31	36	42	49	57	46	53	61	71	82	95
	235	30	34	40	47	54	63	50	58	68	78	90	104
	260	33	38	44	51	60	69	55	64	74	86	99	114
	285	36	42	49	57	66	76	61	71	82	94	109	125
	310	40	46	54	63	72	84	67	78	90	104	119	137

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	35	40	47	55	63	73	59	68	79	91	105	121
	210	38	45	52	60	70	81	65	75	87	100	115	132
	235	42	49	57	66	77	89	71	83	95	110	126	144
	260	47	54	63	73	84	97	79	91	105	120	138	158
	285	52	60	69	80	93	107	86	100	115	132	151	172
	310	57	66	76	88	102	117	95	109	126	144	164	187
GLUCOSE INTOLERANCE PRESENT	185	57	66	76	88	101	116	94	109	125	143	163	186
	210	62	72	84	96	111	127	103	119	137	156	178	202
	235	69	79	92	106	122	139	113	130	149	170	194	219
	260	76	87	101	116	133	152	124	142	163	185	210	238
	285	83	96	111	127	145	166	136	156	177	202	228	257
	310	91	105	121	139	159	181	149	170	193	219	247	277

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 60 YRS HAVE AN AVERAGE SBP OF 140 MM HG AND AN AVERAGE SERUM CHOL OF 235 MG%. 51 PERCENT SMOKE CIGARETTES, 5.4 PERCENT HAVE DEFINITE LVH BY ECG AND 8.3 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS IS 37/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

65 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

GLUCOSE INTOLERANCE ABSENT

	DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
CHOL \ SBP	105	120	135	150	165	180	105	120	135	150	165	180
185	17	20	23	27	31	36	29	34	39	46	53	61
210	18	21	24	29	33	39	31	36	42	49	56	65
235	19	22	26	30	35	41	33	38	44	52	60	69
260	20	24	28	32	38	44	35	41	47	55	64	74
285	22	25	30	34	40	47	37	43	50	58	67	78
310	23	27	31	37	43	49	39	46	53	62	72	83

GLUCOSE INTOLERANCE PRESENT

	DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
CHOL \ SBP	105	120	135	150	165	180	105	120	135	150	165	180
185	28	32	38	44	51	59	47	55	64	74	85	98
210	30	34	40	47	54	63	50	58	68	78	90	104
235	32	37	43	50	58	67	53	62	72	83	96	110
260	34	39	45	53	61	71	57	66	76	88	102	117
285	36	41	48	56	65	75	60	70	81	93	108	124
310	38	44	51	59	69	80	64	74	86	99	114	131

--LVH-ECG POSITIVE--

GLUCOSE INTOLERANCE ABSENT

	DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
CHOL \ SBP	105	120	135	150	165	180	105	120	135	150	165	180
185	40	46	54	62	72	84	67	78	90	104	119	137
210	42	49	57	66	77	89	71	83	95	110	126	144
235	45	52	61	70	81	94	76	88	101	116	133	153
260	48	56	65	75	86	100	80	93	107	123	141	161
285	51	59	69	79	92	106	85	98	113	130	149	170
310	54	63	73	84	97	112	90	104	120	137	157	179

GLUCOSE INTOLERANCE PRESENT

	DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
CHOL \ SBP	105	120	135	150	165	180	105	120	135	150	165	180
185	65	75	87	100	115	132	107	123	141	162	184	209
210	69	80	92	106	122	140	114	130	149	170	194	220
235	73	84	97	112	129	147	120	138	158	180	204	231
260	77	89	103	119	136	156	127	146	166	189	215	242
285	82	95	109	125	144	164	134	154	175	199	226	254
310	87	100	116	133	152	173	142	162	185	210	237	267

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 65 YRS HAVE AN AVERAGE SBP OF 143 MM HG AND AN AVERAGE SERUM CHOL OF 236 MG%. 45 PERCENT SMOKE CIGARETTES, 7.9 PERCENT HAVE DEFINITE LVH BY ECG AND 9.6 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS IS 40/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

70 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	16	19	22	26	31	36	28	33	38	45	52	60
	210	17	20	23	27	31	36	29	34	39	46	53	62
	235	17	20	24	27	32	37	30	35	40	47	54	63
	260	18	21	24	28	33	38	30	35	41	48	56	64
	285	18	21	25	29	34	39	31	36	42	49	57	66
	310	19	22	25	30	34	40	32	37	43	50	58	67
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	27	32	37	43	50	58	45	54	62	72	83	96
	210	28	32	38	44	51	59	47	55	64	74	85	98
	235	29	33	39	45	52	61	48	56	65	76	87	101
	260	29	34	40	46	53	62	50	58	67	77	89	103
	285	30	35	41	47	55	63	51	59	68	79	91	105
	310	31	36	42	48	56	65	52	60	70	81	93	108

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	39	45	53	61	71	82	66	76	88	101	117	134
	210	40	46	54	63	72	84	67	78	90	104	119	137
	235	41	48	55	64	74	86	69	80	92	106	122	140
	260	42	49	56	65	76	88	70	81	94	108	125	143
	285	43	50	58	67	78	90	72	83	96	111	127	146
	310	44	51	59	69	79	92	74	85	98	113	130	149
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	63	73	85	98	113	129	105	121	138	158	180	205
	210	65	75	87	100	115	132	107	123	141	162	184	209
	235	66	77	89	102	118	135	110	126	144	165	188	213
	260	68	78	91	105	120	138	112	129	147	168	192	217
	285	69	80	93	107	123	141	115	132	151	172	195	221
	310	71	82	95	109	126	144	117	134	154	175	199	226

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 70 YRS HAVE AN AVERAGE SBP OF 145 MM HG AND AN AVERAGE SERUM CHOL OF 234 MG%. 40 PERCENT SMOKE CIGARETTES,10.4 PERCENT HAVE DEFINITE LVH BY ECG AND10.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS IS 37/1000.

TABLE 1B-2

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

45 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	1	1	1	2	2	3	1	1	2	2	3	3
	210	1	1	2	2	3	3	1	2	2	2	3	4
	235	1	2	2	3	3	4	1	2	2	3	4	5
	260	2	2	2	3	4	5	2	2	3	3	4	5
	285	2	2	3	4	4	6	2	3	3	4	5	6
	310	2	3	3	4	5	7	2	3	4	5	6	7
GLUCOSE INTOLERANCE PRESENT	185	1	1	2	2	3	4	1	2	2	3	3	4
	210	1	2	2	3	3	4	2	2	2	3	4	5
	235	2	2	2	3	4	5	2	2	3	4	4	6
	260	2	2	3	4	5	6	2	3	3	4	5	7
	285	2	3	3	4	5	7	2	3	4	5	6	8
	310	3	3	4	5	6	8	3	4	5	6	7	9

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	2	3	3	4	5	7	2	3	4	5	6	7
	210	2	3	4	5	6	8	3	3	4	6	7	9
	235	3	4	5	6	7	9	3	4	5	6	8	10
	260	3	4	5	7	8	11	4	5	6	8	10	12
	285	4	5	6	8	10	12	5	6	7	9	11	14
	310	5	6	7	9	12	15	5	7	8	10	13	16
GLUCOSE INTOLERANCE PRESENT	185	3	3	4	5	6	8	3	4	5	6	7	9
	210	3	4	5	6	7	9	3	4	5	7	8	11
	235	4	4	6	7	9	11	4	5	6	8	10	12
	260	4	5	7	8	10	13	5	6	7	9	12	14
	285	5	6	8	10	12	15	5	7	9	11	14	17
	310	6	7	9	11	14	18	6	8	10	13	16	20

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 45 YRS HAVE AN AVERAGE SBP OF 128 MM HG AND AN AVERAGE SERUM CHOL OF 228 MG%. 50 PERCENT SMOKE CIGARETTES, 0.6 PERCENT HAVE DEFINITE LVH BY ECG AND 2.5 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS IS 2/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

60 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
		SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	5	6	8	9	12	15	5	7	9	11	13	17
	210	6	7	9	11	14	17	6	8	10	13	16	20
	235	7	8	10	13	16	20	7	9	12	15	18	23
	260	8	10	12	15	19	24	9	11	14	17	21	27
	285	9	11	14	18	22	28	10	13	16	20	25	31
	310	11	13	17	21	26	33	12	15	19	24	29	37
		SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	6	7	9	11	14	18	7	8	10	13	16	20
	210	7	9	11	13	17	21	8	10	12	15	19	24
	235	8	10	13	16	20	25	9	11	14	18	22	28
	260	9	12	15	18	23	29	11	13	17	21	26	32
	285	11	14	17	22	27	34	12	16	19	24	30	38
	310	13	16	20	25	32	39	14	18	23	28	35	44

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
		SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	11	13	17	21	26	33	12	15	19	24	29	37
	210	13	16	20	25	31	38	14	18	22	28	34	43
	235	15	18	23	29	36	45	16	21	26	32	40	50
	260	17	21	27	33	42	52	19	24	30	38	47	58
	285	20	25	31	39	49	60	23	28	35	44	55	68
	310	23	29	37	46	57	70	26	33	41	51	63	78
		SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	13	16	20	25	32	39	15	18	23	28	36	44
	210	15	19	24	30	37	46	17	21	27	33	41	52
	235	18	22	28	35	43	54	20	25	31	39	48	60
	260	21	26	32	40	50	62	23	29	36	45	56	70
	285	24	30	38	47	58	72	27	34	42	53	65	81
	310	28	35	44	55	68	84	32	40	49	61	76	94

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 60 YRS HAVE AN AVERAGE SBP OF 149 MM HG AND AN AVERAGE SERUM CHOL OF 262 MG%. 27 PERCENT SMOKE CIGARETTES, 4.0 PERCENT HAVE DEFINITE LVH BY ECG AND 6.6 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS IS 16/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

65 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	6	8	10	12	15	19	7	9	11	14	17	22
	210	7	9	11	14	18	22	8	10	13	16	20	25
	235	9	11	13	17	21	26	10	12	15	19	24	29
	260	10	12	16	20	24	31	11	14	18	22	28	34
	285	12	15	18	23	29	36	13	16	21	26	32	40
	310	14	17	21	27	33	42	15	19	24	30	37	47

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	8	9	12	15	19	23	8	11	13	17	21	26
	210	9	11	14	17	22	27	10	12	16	19	24	30
	235	10	13	16	20	25	32	12	15	18	23	28	35
	260	12	15	19	24	30	37	14	17	21	27	33	41
	285	14	18	22	28	34	43	16	20	25	31	39	48
	310	17	21	26	32	40	50	19	23	29	36	45	56

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	14	17	22	27	34	42	15	19	24	30	38	47
	210	16	20	25	31	39	49	18	23	28	35	44	55
	235	19	24	29	37	46	57	21	26	33	41	51	64
	260	22	27	34	43	53	66	25	31	39	48	60	74
	285	26	32	40	50	62	76	29	36	45	56	69	85
	310	30	37	47	58	72	88	34	42	52	65	80	99

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	17	21	26	32	40	50	19	23	29	36	45	56
	210	19	24	30	38	47	59	22	27	34	43	53	66
	235	23	28	35	44	55	68	26	32	40	49	61	76
	260	27	33	41	51	64	79	30	37	46	58	71	88
	285	31	39	48	60	74	91	35	43	54	67	83	102
	310	36	45	56	69	86	105	41	51	63	78	96	117

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 65 YRS HAVE AN AVERAGE SBP OF 153 MM HG AND AN AVERAGE SERUM CHOL OF 264 MG%. 22 PERCENT SMOKE CIGARETTES, 6.4 PERCENT HAVE DEFINITE LVH BY ECG AND 8.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS IS 23/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

70 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

	DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES						
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE ABSENT	185	7	9	11	14	17	21	185	8	10	12	15	19	24
	210	8	10	13	16	20	25	210	9	11	14	18	22	28
	235	9	12	15	19	23	29	235	11	13	17	21	26	33
	260	11	14	17	22	27	34	260	12	16	20	24	31	38
	285	13	16	20	25	32	40	285	15	18	23	29	36	44
	310	15	19	24	30	37	46	310	17	21	27	33	42	52

	DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES						
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE PRESENT	185	8	10	13	16	21	26	185	9	12	15	19	23	29
	210	10	12	15	19	24	30	210	11	14	17	22	27	34
	235	11	14	18	23	28	35	235	13	16	20	25	32	39
	260	13	17	21	26	33	41	260	15	19	24	30	37	46
	285	16	20	25	31	38	48	285	18	22	28	34	43	53
	310	18	23	29	36	45	55	310	21	26	32	40	50	62

--LVH-ECG POSITIVE--

	DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES						
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE ABSENT	185	15	19	24	30	37	47	185	17	22	27	34	42	52
	210	18	22	28	35	44	54	210	20	25	31	39	49	61
	235	21	26	33	41	51	63	235	24	29	37	46	57	70
	260	24	31	38	47	59	73	260	27	34	43	53	66	81
	285	29	36	44	55	68	84	285	32	40	50	62	76	94
	310	33	42	52	64	79	98	310	37	47	58	72	88	109

	DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES						
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE PRESENT	185	19	23	29	36	45	56	185	21	26	33	41	50	63
	210	22	27	34	42	52	65	210	24	30	38	47	59	73
	235	25	32	39	49	61	75	235	28	35	44	55	68	84
	260	30	37	46	57	71	87	260	33	41	51	64	79	97
	285	34	43	53	66	82	101	285	39	48	60	74	91	112
	310	40	50	62	77	94	116	310	45	56	69	86	105	129

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 70 YRS HAVE AN AVERAGE SBP OF 157 MM HG AND AN AVERAGE SERUM CHOL OF 267 MG%. 17 PERCENT SMOKE CIGARETTES, 6.4 PERCENT HAVE DEFINITE LVH BY ECG AND11.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN TWO YEARS IS 28/1000.

TABLE 2B

PROBABILITY OF DEVELOPING CHD IN FOUR YEARS

Men (Table 2B-1)
Women (Table 2B-2)

TABLE 28-1

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

35 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	1	2	2	2	3	3	2	3	3	4	4	5
	210	2	2	3	3	4	4	3	4	4	5	6	8
	235	3	3	4	4	5	6	4	5	6	8	9	11
	260	4	4	5	6	7	9	6	7	9	11	13	15
	285	5	6	7	9	11	13	9	11	13	15	18	21
	310	7	9	10	12	15	18	13	15	18	21	25	30
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	2	2	2	3	4	4	3	4	4	5	6	7
	210	2	3	3	4	5	6	4	5	6	7	8	10
	235	3	4	5	6	7	8	6	7	8	10	12	14
	260	5	6	7	8	10	12	8	10	12	14	17	20
	285	7	8	10	12	14	17	12	14	17	20	24	28
	310	10	12	14	17	20	24	17	20	24	28	34	40

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	3	4	5	6	7	8	6	7	8	9	11	13
	210	5	5	7	8	9	11	8	9	11	13	16	19
	235	7	8	9	11	13	16	11	13	16	19	22	27
	260	9	11	13	16	19	22	16	19	22	27	32	37
	285	13	16	19	22	26	31	22	26	31	37	44	52
	310	18	22	26	31	37	44	31	37	44	52	62	73
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	4	5	6	7	9	11	7	9	11	13	15	18
	210	6	7	9	10	13	15	11	13	15	18	21	25
	235	9	10	12	15	18	21	15	18	21	25	30	36
	260	12	15	18	21	25	30	21	25	30	35	42	50
	285	17	21	25	29	35	41	30	35	42	49	58	69
	310	25	29	35	41	49	58	41	49	58	69	81	95

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 35 YRS HAVE AN AVERAGE SBP OF 128 MM HG AND AN AVERAGE SERUM CHOL OF 221 MG%. 70 PERCENT SMOKE CIGARETTES, 0.0 PERCENT HAVE DEFINITE LVH BY ECG AND 2.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 4/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

40 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
	185	3	4	5	6	7	8	6	7	8	10	12	14
GLUCOSE	210	4	5	6	8	9	11	8	9	11	13	16	19
INTOLERANCE	235	6	7	9	10	12	15	10	12	15	18	21	25
ABSENT	260	8	10	12	14	17	20	14	17	20	24	28	33
	285	11	13	16	19	22	27	19	22	27	32	38	45
	310	15	18	21	25	30	36	25	30	36	42	50	59
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
	185	4	5	6	8	9	11	8	9	11	13	15	18
GLUCOSE	210	6	7	9	10	12	15	10	12	15	17	21	25
INTOLERANCE	235	8	10	12	14	16	20	14	17	20	23	28	33
PRESENT	260	11	13	16	19	22	26	19	22	26	31	37	44
	285	15	18	21	25	30	35	25	30	35	42	50	59
	310	20	24	28	33	40	47	34	40	47	56	66	78

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
	185	8	10	12	14	17	20	14	17	20	24	29	34
GLUCOSE	210	11	13	16	19	23	27	19	23	27	32	39	46
INTOLERANCE	235	15	18	22	26	31	36	26	31	37	43	51	61
ABSENT	260	21	24	29	35	41	49	35	41	49	58	68	80
	285	28	33	39	46	55	65	46	55	65	77	90	106
	310	37	44	52	61	72	85	62	73	86	101	118	138
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
	185	11	13	16	19	23	27	19	23	27	32	38	45
GLUCOSE	210	15	18	21	26	30	36	26	31	36	43	51	60
INTOLERANCE	235	20	24	29	34	41	48	34	41	48	57	68	80
PRESENT	260	27	33	39	46	54	64	46	55	64	76	90	105
	285	37	43	52	61	72	85	61	72	85	100	117	137
	310	49	58	68	81	95	111	81	95	112	131	153	177

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 40 YRS HAVE AN AVERAGE SBP OF 129 MM HG AND AN AVERAGE SERUM CHOL OF 229 MG%. 69 PERCENT SMOKE CIGARETTES, 0.6 PERCENT HAVE DEFINITE LVH BY ECG AND 2.6 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 11/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

45 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

DOES NOT SMOKE CIGARETTES

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	7	9	10	12	15	18
	210	9	11	13	16	19	23
	235	12	14	17	20	24	29
	260	16	19	22	26	31	37
	285	20	24	28	34	40	47
	310	26	30	36	43	51	60

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	10	12	14	17	20	24
	210	13	15	18	21	25	30
	235	16	19	23	27	32	39
	260	21	25	29	35	41	49
	285	27	32	38	45	53	62
	310	34	40	48	57	67	79

SMOKES CIGARETTES

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	13	15	18	21	25	30
	210	16	19	23	27	32	38
	235	21	25	29	35	41	49
	260	26	31	37	44	52	62
	285	34	40	47	56	66	78
	310	43	51	60	71	84	99

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	17	20	24	28	34	40
	210	21	26	30	36	43	51
	235	27	33	39	46	54	64
	260	35	42	49	58	69	81
	285	45	53	63	74	87	103
	310	57	67	79	93	110	128

--LVH-ECG POSITIVE--

DOES NOT SMOKE CIGARETTES

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	18	22	26	31	37	44
	210	24	28	33	40	47	56
	235	30	36	42	50	60	70
	260	38	46	54	64	75	89
	285	49	58	69	81	95	112
	310	62	74	87	102	119	139

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	25	29	35	41	49	58
	210	31	37	44	52	62	73
	235	40	48	56	66	78	92
	260	51	60	71	84	99	116
	285	65	76	90	106	124	144
	310	82	96	113	132	154	179

SMOKES CIGARETTES

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	31	37	44	52	61	73
	210	40	47	56	66	78	92
	235	51	60	71	83	98	115
	260	64	76	89	105	123	143
	285	81	96	112	131	153	177
	310	102	120	140	163	189	217

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	41	49	58	69	81	95
	210	53	62	74	87	102	119
	235	67	79	93	109	127	149
	260	84	99	116	136	158	184
	285	106	124	145	169	195	225
	310	133	155	179	207	238	272

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*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 45 YRS HAVE AN AVERAGE SBP OF 131 MM HG AND AN AVERAGE SERUM CHOL OF 235 MG%. 67 PERCENT SMOKE CIGARETTES, 1.3 PERCENT HAVE DEFINITE LVH BY ECG AND 3.8 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 24/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

50 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	14	16	19	23	28	33	23	28	33	39	46	55
	210	17	20	24	28	34	40	28	34	40	48	56	67
	235	20	24	29	34	41	49	35	41	49	58	68	80
	260	25	30	35	42	50	59	42	50	59	70	82	97
	285	31	36	43	51	60	71	51	61	72	84	99	116
	310	37	44	52	62	73	86	62	73	87	102	119	139
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	18	22	26	31	37	44	31	37	44	52	61	72
	210	22	27	32	38	45	53	38	45	53	63	74	87
	235	27	32	39	46	54	64	46	54	64	76	90	105
	260	33	40	47	56	66	78	56	66	78	92	108	126
	285	41	48	57	67	80	94	68	80	94	110	129	150
	310	49	58	69	81	96	112	82	96	113	132	154	179

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	34	40	48	57	67	79	57	67	79	93	110	128
	210	41	49	58	69	81	95	69	81	96	112	131	153
	235	50	60	70	83	98	114	83	98	115	134	157	181
	260	61	72	85	100	117	137	100	118	138	160	186	214
	285	74	87	102	120	140	163	121	141	164	190	218	250
	310	89	105	123	143	167	193	144	167	194	223	255	291
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	45	53	63	75	88	103	75	88	104	122	142	165
	210	55	65	77	90	106	124	91	106	124	145	169	195
	235	66	78	92	108	127	148	109	127	149	173	200	229
	260	80	95	111	130	151	176	130	152	176	204	234	268
	285	97	114	133	155	180	207	155	180	208	239	273	310
	310	116	136	158	184	212	243	184	213	244	278	315	355

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 50 YRS HAVE AN AVERAGE SBP OF 134 MM HG AND AN AVERAGE SERUM CHOL OF 236 MG%. 62 PERCENT SMOKE CIGARETTES, 2.1 PERCENT HAVE DEFINITE LVH BY ECG AND 6.3 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 41/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

55 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	22	26	31	37	43	51	37	44	52	61	72	85
	210	25	30	36	42	50	60	43	51	60	71	83	98
	235	29	35	42	49	58	69	50	59	69	82	96	113
	260	34	41	48	57	68	80	57	68	80	94	111	129
	285	40	47	56	66	78	92	67	78	92	108	127	148
	310	46	55	65	77	90	106	77	91	106	124	145	169

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	29	34	41	48	57	68	49	58	68	80	95	111
	210	34	40	47	56	66	78	56	67	79	93	109	127
	235	39	46	55	65	77	90	65	77	91	107	125	146
	260	46	54	64	75	89	104	76	89	105	123	143	166
	285	53	63	74	87	102	120	87	103	120	140	163	189
	310	61	72	85	100	117	137	101	118	138	160	186	214

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	53	63	74	88	103	121	88	103	121	142	165	191
	210	62	73	86	101	118	138	101	119	139	162	187	216
	235	71	84	99	116	136	158	117	136	159	184	212	244
	260	83	97	114	133	155	180	134	156	181	209	240	273
	285	95	112	131	152	177	204	153	177	205	236	269	306
	310	110	128	150	174	201	231	174	201	232	265	301	340

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	70	83	97	114	134	156	115	134	156	181	209	240
	210	81	96	112	131	153	177	132	153	178	206	236	270
	235	94	110	129	150	174	201	151	175	202	232	266	302
	260	108	126	147	171	198	228	172	199	229	261	297	336
	285	124	145	168	194	224	256	195	225	257	293	331	372
	310	142	165	191	220	252	287	221	253	288	326	366	409

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 55 YRS HAVE AN AVERAGE SBP OF 138 MM HG AND AN AVERAGE SERUM CHOL OF 235 MG%. 57 PERCENT SMOKE CIGARETTES, 3.7 PERCENT HAVE DEFINITE LVH BY ECG AND 7.3 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 61/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

60 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

	DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES						
	CHOL	SBP 105	120	135	150	165	180	CHOL	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	29	35	41	49	58	69	185	49	58	69	81	96	112
	210	33	39	46	54	64	76	210	55	65	76	90	105	123
	235	36	43	51	60	71	84	235	60	71	84	99	116	136
	260	40	48	56	67	79	92	260	67	79	93	109	128	149
	285	44	53	62	74	87	102	285	74	87	102	120	140	163
	310	49	58	69	81	96	112	310	82	96	113	132	154	178
GLUCOSE INTOLERANCE PRESENT	185	39	46	55	65	76	90	185	65	77	90	106	124	145
	210	43	51	61	72	84	99	210	72	85	100	117	137	159
	235	48	57	67	79	93	109	235	80	94	110	129	150	174
	260	53	63	74	87	103	120	260	88	103	121	141	164	190
	285	59	70	82	96	113	132	285	97	114	133	155	179	207
	310	65	77	90	106	124	145	310	107	125	146	169	196	226

--LVH-ECG POSITIVE--

	DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES						
	CHOL	SBP 105	120	135	150	165	180	CHOL	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	71	84	99	116	135	157	185	116	136	158	183	211	243
	210	79	93	109	127	148	172	210	128	149	173	200	230	263
	235	87	102	120	140	162	188	235	140	163	189	218	250	284
	260	96	112	131	153	178	205	260	154	178	206	237	270	307
	285	106	124	144	168	194	223	285	168	195	224	257	292	330
	310	116	136	158	183	211	243	310	184	212	244	278	315	355
GLUCOSE INTOLERANCE PRESENT	185	93	109	128	149	173	201	185	150	174	201	231	265	301
	210	103	120	141	164	189	218	210	164	190	219	251	286	324
	235	113	132	154	179	207	237	235	180	207	238	272	309	348
	260	125	145	169	195	225	257	260	196	226	258	294	332	373
	285	137	159	185	213	244	279	285	214	245	280	317	357	398
	310	150	174	201	232	265	301	310	232	266	302	341	382	425

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 60 YRS HAVE AN AVERAGE SBP OF 140 MM HG AND AN AVERAGE SERUM CHOL OF 235 MG%. 51 PERCENT SMOKE CIGARETTES, 5.4 PERCENT HAVE DEFINITE LVH BY ECG AND 8.3 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 75/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

65 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	34	40	48	56	67	79	57	67	79	93	109	128
	210	36	42	50	60	70	83	60	71	83	98	115	134
	235	38	45	53	63	74	88	63	75	88	103	121	141
	260	40	48	56	67	79	92	67	79	93	109	128	149
	285	42	50	60	70	83	98	71	83	98	115	134	156
	310	45	53	63	74	88	103	75	88	103	121	141	164

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	45	53	63	74	87	103	75	88	103	121	141	164
	210	47	56	66	78	92	108	79	93	109	127	149	172
	235	50	59	70	83	97	114	83	98	115	134	156	181
	260	53	63	74	87	103	120	88	103	121	141	164	190
	285	56	66	78	92	108	127	93	109	127	149	173	199
	310	59	70	83	97	114	134	98	115	134	156	181	209

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	81	96	112	131	153	178	132	154	178	206	237	270
	210	86	101	118	138	161	187	139	162	187	216	248	282
	235	91	107	125	146	169	196	146	170	196	226	259	294
	260	96	112	131	153	178	205	154	178	206	237	270	307
	285	101	118	138	161	187	215	162	187	216	248	282	320
	310	107	125	146	169	196	225	170	196	226	259	294	333

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	106	125	145	169	195	225	170	196	226	258	294	332
	210	112	131	153	177	205	235	178	206	236	270	307	346
	235	118	138	161	186	215	246	187	216	247	282	319	359
	260	125	145	169	195	225	258	196	226	258	294	332	373
	285	131	153	177	205	235	269	206	236	270	307	346	387
	310	138	161	186	215	246	281	216	247	282	319	359	401

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 65 YRS HAVE AN AVERAGE SBP OF 143 MM HG AND AN AVERAGE SERUM CHOL OF 236 MG%. 45 PERCENT SMOKE CIGARETTES, 7.9 PERCENT HAVE DEFINITE LVH BY ECG AND 9.6 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 80/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

70 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	33	40	47	55	66	77	56	66	78	92	107	126
	210	34	40	47	56	66	78	56	67	79	92	109	127
	235	34	40	48	57	67	79	57	67	79	93	110	128
	260	34	41	48	57	68	80	57	68	80	94	111	129
	285	35	41	49	58	68	81	58	69	81	95	112	131
	310	35	42	49	58	69	81	59	69	82	96	113	132

	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	44	52	62	73	86	101	73	87	102	119	139	162
	210	45	53	63	74	87	102	74	87	103	120	141	163
	235	45	53	63	75	88	103	75	88	104	122	142	165
	260	46	54	64	75	89	104	76	89	105	123	143	166
	285	46	55	65	76	90	105	76	90	106	124	145	168
	310	47	55	65	77	91	106	77	91	107	125	146	170

--LVH-ECG POSITIVE--

	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	80	94	111	130	151	175	130	152	176	203	234	267
	210	81	95	112	131	152	177	131	153	178	205	236	269
	235	82	96	113	132	154	179	133	155	179	207	238	272
	260	83	97	114	133	155	180	134	156	181	209	240	274
	285	84	98	115	135	157	182	135	157	182	211	242	276
	310	84	99	116	136	158	183	136	159	184	212	244	278

	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	105	123	143	167	193	222	167	194	223	255	291	329
	210	106	124	145	168	195	224	169	195	225	257	293	331
	235	107	125	146	170	196	226	170	197	227	260	295	334
	260	108	126	147	171	198	228	172	199	229	262	298	336
	285	109	128	149	173	200	230	174	201	231	264	300	339
	310	110	129	150	174	202	232	175	202	233	266	302	341

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 70 YRS HAVE AN AVERAGE SBP OF 145 MM HG AND AN AVERAGE SERUM CHOL OF 234 MG%. 40 PERCENT SMOKE CIGARETTES,10.4 PERCENT HAVE DEFINITE LVH BY ECG AND10.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 74/1000.

TABLE 2B-2

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

45 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL \ SBP	105	120	135	150	165	180	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	3	4	5	5	7	8	3	4	5	6	7	9
	210	3	4	5	6	8	9	4	4	5	7	8	10
	235	4	5	6	7	8	10	4	5	6	7	9	11
	260	4	5	6	8	10	12	5	6	7	8	10	12
	285	5	6	7	9	11	13	5	6	8	9	11	14
	310	5	7	8	10	12	15	6	7	9	11	13	16
GLUCOSE INTOLERANCE PRESENT	185	4	5	6	7	8	10	4	5	6	7	9	11
	210	4	5	6	8	9	11	5	6	7	8	10	12
	235	5	6	7	9	11	13	5	6	8	9	11	14
	260	5	7	8	10	12	14	6	7	9	10	13	15
	285	6	7	9	11	13	16	6	8	10	12	14	17
	310	7	8	10	12	15	18	7	9	11	13	16	19

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL \ SBP	105	120	135	150	165	180	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	6	8	9	11	14	17	7	8	10	12	15	18
	210	7	9	11	13	16	19	8	9	11	14	17	20
	235	8	10	12	14	18	21	9	10	13	15	19	23
	260	9	11	13	16	20	24	10	12	14	17	21	26
	285	10	12	15	18	22	27	11	13	16	19	24	29
	310	11	14	17	20	25	30	12	15	18	22	27	32
GLUCOSE INTOLERANCE PRESENT	185	8	10	12	14	17	21	8	10	12	15	18	22
	210	9	11	13	16	19	24	9	11	14	17	21	25
	235	10	12	15	18	22	26	11	13	16	19	23	28
	260	11	14	17	20	24	30	12	14	18	21	26	32
	285	13	15	19	23	27	33	13	16	20	24	29	36
	310	14	17	21	25	31	37	15	18	22	27	33	40

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 45 YRS HAVE AN AVERAGE SBP OF 128 MM HG AND AN AVERAGE SERUM CHOL OF 228 MG%. 50 PERCENT SMOKE CIGARETTES, 0.6 PERCENT HAVE DEFINITE LVH BY ECG AND 2.5 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 5/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

50 YEAR OLD WOMAN**

DOES NOT SMOKE CIGARETTES | SMOKES CIGARETTES

--LVH-ECG NEGATIVE--

GLUCOSE INTOLERANCE ABSENT

	DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
SBP	105	120	135	150	165	180	105	120	135	150	165	180
CHOL												
185	6	7	9	11	13	16	6	8	9	11	14	17
210	7	8	10	12	15	18	7	9	10	13	16	19
235	7	9	11	13	16	20	8	10	12	14	17	21
260	8	10	12	15	18	22	9	11	13	16	20	24
285	9	11	14	17	21	25	10	12	15	18	22	27
310	11	13	16	19	23	28	11	14	17	20	25	30

GLUCOSE INTOLERANCE PRESENT

	DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
SBP	105	120	135	150	165	180	105	120	135	150	165	180
CHOL												
185	7	9	11	13	16	20	8	9	12	14	17	21
210	8	10	12	15	18	22	9	11	13	16	19	23
235	9	11	14	17	20	25	10	12	15	18	22	26
260	10	13	15	19	23	28	11	13	16	20	24	30
285	12	14	17	21	26	31	12	15	18	22	27	33
310	13	16	19	24	29	35	14	17	21	25	31	37

--LVH-ECG POSITIVE--

GLUCOSE INTOLERANCE ABSENT

	DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
SBP	105	120	135	150	165	180	105	120	135	150	165	180
CHOL												
185	12	15	18	22	27	32	13	16	19	23	29	35
210	14	17	20	25	30	36	15	18	22	26	32	39
235	15	19	23	28	34	41	16	20	24	30	36	43
260	17	21	26	31	38	46	18	22	27	33	40	49
285	19	24	29	35	42	51	21	25	31	37	45	54
310	22	27	32	39	47	57	23	28	34	42	50	61

GLUCOSE INTOLERANCE PRESENT

	DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
SBP	105	120	135	150	165	180	105	120	135	150	165	180
CHOL												
185	15	18	22	27	33	40	16	20	24	29	35	43
210	17	21	25	30	37	45	18	22	27	33	39	48
235	19	23	28	34	41	50	20	25	30	36	44	53
260	21	26	32	38	46	56	23	28	34	41	49	60
285	24	29	35	43	52	63	26	31	38	46	55	67
310	27	33	40	48	58	70	29	35	42	51	62	75

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 50 YRS HAVE AN AVERAGE SBP OF 135 MM HG AND AN AVERAGE SERUM CHOL OF 245 MG%. 43 PERCENT SMOKE CIGARETTES, 0.7 PERCENT HAVE DEFINITE LVH BY ECG AND 3.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 12/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

55 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

	DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES						
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE ABSENT	185	10	12	15	18	22	26	185	10	13	16	19	23	28
	210	11	13	16	20	24	29	210	12	14	17	21	26	31
	235	12	15	18	22	27	33	235	13	16	20	24	29	35
	260	14	17	21	25	30	37	260	15	18	22	27	32	39
	285	16	19	23	28	34	41	285	17	20	25	30	36	44
	310	18	21	26	32	38	46	310	19	23	28	34	41	49
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE PRESENT	185	12	15	18	22	27	32	185	13	16	19	23	28	34
	210	14	17	20	25	30	36	210	15	18	22	26	32	39
	235	15	19	23	28	33	41	235	16	20	24	29	36	43
	260	17	21	25	31	38	45	260	18	22	27	33	40	48
	285	19	24	29	35	42	51	285	21	25	31	37	45	54
	310	22	26	32	39	47	57	310	23	28	34	41	50	61

--LVH-ECG POSITIVE--

	DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES						
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE ABSENT	185	20+	25+	30	36	44	53	185	22+	26+	32	39	47	57
	210	23	28	34	41	49	60	210	24	29	36	43	52	63
	235	26	31	38	46	55	66	235	27	33	40	49	59	71
	260	29	35	42	51	62	74	260	31	37	45	54	66	79
	285	32	39	47	57	69	83	285	34	42	50	61	73	88
	310	36	44	53	64	77	92	310	38	47	56	68	82	98
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE PRESENT	185	25	30	37	45	54	65	185	27	32	39	48	58	69
	210	28	34	41	50	60	73	210	30	36	44	53	64	78
	235	32	38	46	56	68	81	235	34	41	49	60	72	86
	260	35	43	52	63	75	91	260	38	46	55	67	80	96
	285	40	48	58	70	84	101	285	42	51	62	74	89	107
	310	44	54	65	78	94	112	310	47	57	69	83	100	119

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 55 YRS HAVE AN AVERAGE SBP OF 142 MM HG AND AN AVERAGE SERUM CHOL OF 258 MG%. 34 PERCENT SMOKE CIGARETTES, 2.3 PERCENT HAVE DEFINITE LVH BY ECG AND 4.9 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 24/1000.

+THESE PROBABILITIES ARE INCONSISTENT WITH THE CORRESPONDING PROBABILITIES IN THE SIX-YEAR FOLLOWUP.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

60 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	14	17	21	25	31	37	15	18	22	27	33	40
	210	16	19	23	28	35	42	17	21	25	30	37	45
	235	18	22	26	32	39	47	19	23	28	34	41	50
	260	20	24	29	36	43	52	21	26	31	38	46	56
	285	22	27	33	40	49	59	24	29	35	43	52	62
	310	25	31	37	45	54	66	27	33	40	48	58	70
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	17	21	26	31	38	46	19	23	28	33	40	49
	210	20	24	29	35	43	51	21	25	31	37	45	55
	235	22	27	32	39	48	58	23	29	35	42	51	61
	260	25	30	36	44	53	64	26	32	39	47	57	68
	285	28	34	41	49	60	72	30	36	43	53	63	76
	310	31	38	46	55	67	80	33	40	49	59	71	85

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	29+	35	43	52	62	75	31+	38+	45	55	66	80
	210	33+	39	48	58	70	84	35+	42	51	61	74	89
	235	36	44	53	64	78	93	39	47	57	69	83	99
	260	41	49	60	72	87	104	44	53	64	77	92	110
	285	46	55	67	80	96	115	49	59	71	85	102	122
	310	51	62	75	90	107	128	55	66	79	95	114	136
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	36	43	52	63	76	92	38	46	56	67	81	97
	210	40	49	59	71	85	102	43	52	62	75	90	108
	235	45	54	66	79	95	113	48	58	70	84	101	120
	260	50	61	73	88	105	126	54	65	78	93	112	133
	285	56	68	82	98	117	139	60	72	87	104	124	148
	310	63	76	91	109	130	154	67	81	97	116	138	163

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 60 YRS HAVE AN AVERAGE SBP OF 149 MM HG AND AN AVERAGE SERUM CHOL OF 262 MG%. 27 PERCENT SMOKE CIGARETTES, 4.0 PERCENT HAVE DEFINITE LVH BY ECG AND 6.6 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 38/1000.

+THESE PROBABILITIES ARE INCONSISTENT WITH THE CORRESPONDING PROBABILITIES IN THE SIX-YEAR FOLLOWUP.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

65 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	17	21	26	31	38	46	19	23	28	33	41	49
	210	20	24	29	35	43	52	21	25	31	37	45	55
	235	22	27	32	39	48	58	23	29	35	42	51	61
	260	25	30	36	44	53	64	26	32	39	47	57	69
	285	28	34	41	49	60	72	30	36	43	53	64	77
	310	31	38	46	55	67	80	33	40	49	59	71	85

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	22	26	32	39	47	57	23	28	34	41	50	60
	210	24	29	36	43	52	63	26	31	38	46	56	67
	235	27	33	40	48	59	71	29	35	43	52	62	75
	260	31	37	45	54	65	79	33	39	48	58	70	84
	285	34	41	50	61	73	88	36	44	53	65	78	93
	310	38	46	56	68	82	98	41	50	60	72	87	104

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	36	43	52	63	76	92	38	46	56	67	81	97
	210	40	49	59	71	85	102	43	52	62	75	90	108
	235	45	54	66	79	95	113	48	58	70	84	101	120
	260	50	61	73	88	105	126	54	65	78	94	112	133
	285	56	68	82	98	117	139	60	72	87	104	124	148
	310	63	76	91	109	130	154	67	81	97	116	138	163

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	44	53	64	78	93	111	47	57	69	82	99	118
	210	49	60	72	86	104	124	53	63	76	92	110	131
	235	55	67	80	96	115	137	59	71	85	102	122	145
	260	62	74	89	107	128	152	66	79	95	114	135	161
	285	69	83	100	119	142	168	73	88	106	126	150	177
	310	77	92	111	132	157	185	82	98	117	140	166	195

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*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 65 YRS HAVE AN AVERAGE SBP OF 153 MM HG AND AN AVERAGE SERUM CHOL OF 264 MG%. 22 PERCENT SMOKE CIGARETTES, 6.4 PERCENT HAVE DEFINITE LVH BY ECG AND 8.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 50/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

70 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	19	23	28	33	41	49	20	24	29	36	43	52
	210	21	25	31	38	45	55	22	27	33	40	48	59
	235	24	29	35	42	51	61	25	31	37	45	54	65
	260	26	32	39	47	57	69	28	34	41	50	61	73
	285	30	36	44	53	64	77	32	38	46	56	68	82
	310	33	40	49	59	71	85	35	43	52	63	76	91
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	23	28	34	41	50	60	25	30	36	44	53	64
	210	26	31	38	46	56	67	28	34	41	49	60	72
	235	29	35	43	52	62	75	31	38	46	55	67	80
	260	33	40	48	58	70	84	35	42	51	62	74	89
	285	37	44	54	65	78	94	39	47	57	69	83	99
	310	41	50	60	72	87	104	44	53	64	77	92	110

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	38	46	56	68	81	98	41	49	60	72	86	104
	210	43	52	63	75	91	108	46	55	67	80	96	115
	235	48	58	70	84	101	120	51	62	74	89	107	128
	260	54	65	78	94	112	134	57	69	83	100	119	142
	285	60	72	87	104	124	148	64	77	92	111	132	157
	310	67	81	97	116	138	164	71	86	103	123	146	173
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	47	57	69	83	99	118	50	61	73	88	105	126
	210	53	64	77	92	110	131	56	68	81	98	117	139
	235	59	71	85	102	122	145	63	76	91	109	130	154
	260	66	79	95	114	136	161	70	84	101	121	144	170
	285	74	88	106	126	150	177	78	94	112	134	159	187
	310	82	98	118	140	166	195	87	105	125	148	175	206

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 70 YRS HAVE AN AVERAGE SBP OF 157 MM HG AND AN AVERAGE SERUM CHOL OF 267 MG%. 17 PERCENT SMOKE CIGARETTES, 6.4 PERCENT HAVE DEFINITE LVH BY ECG AND11.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN FOUR YEARS IS 57/1000.

TABLE 3B

PROBABILITY OF DEVELOPING CHD IN SIX YEARS

Men (Table 3B-1)
Women (Table 3B-2)

TABLE 3B-1

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

35 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

DOES NOT SMOKE CIGARETTES

GLUCOSE INTOLERANCE ABSENT

CHOL	SBP 105	120	135	150	165	180
185	3	4	5	6	7	8
210	5	5	7	8	10	12
235	6	8	9	11	14	16
260	9	11	13	16	19	23
285	13	16	19	22	27	32
310	18	22	26	32	38	45

GLUCOSE INTOLERANCE PRESENT

CHOL	SBP 105	120	135	150	165	180
185	4	5	6	7	9	11
210	6	7	9	10	12	15
235	8	10	12	15	18	21
260	12	14	17	21	25	30
285	17	20	24	29	35	42
310	24	28	34	41	49	58

SMOKES CIGARETTES

GLUCOSE INTOLERANCE ABSENT

CHOL	SBP 105	120	135	150	165	180
185	5	6	7	9	11	13
210	7	9	10	12	15	18
235	10	12	15	18	21	25
260	14	17	21	25	30	35
285	20	24	29	35	42	50
310	28	34	41	49	58	69

GLUCOSE INTOLERANCE PRESENT

CHOL	SBP 105	120	135	150	165	180
185	7	8	9	11	14	16
210	9	11	13	16	19	23
235	13	16	19	23	27	33
260	19	22	27	32	38	46
285	26	31	37	45	53	64
310	37	44	52	62	74	88

--LVH-ECG POSITIVE--

DOES NOT SMOKE CIGARETTES

GLUCOSE INTOLERANCE ABSENT

CHOL	SBP 105	120	135	150	165	180
185	7	8	10	12	14	17
210	10	11	14	17	20	24
235	14	16	19	23	28	34
260	19	23	27	33	39	47
285	27	32	39	46	55	66
310	38	45	54	64	76	91

GLUCOSE INTOLERANCE PRESENT

CHOL	SBP 105	120	135	150	165	180
185	9	11	13	15	18	22
210	12	15	18	22	26	31
235	18	21	25	30	36	43
260	25	30	36	42	51	61
285	35	42	50	59	71	84
310	49	58	69	82	97	115

SMOKES CIGARETTES

GLUCOSE INTOLERANCE ABSENT

CHOL	SBP 105	120	135	150	165	180
185	11	13	15	18	22	26
210	15	18	21	26	31	37
235	21	25	30	36	43	52
260	30	35	42	51	60	72
285	41	49	59	70	84	99
310	58	69	82	97	115	135

GLUCOSE INTOLERANCE PRESENT

CHOL	SBP 105	120	135	150	165	180
185	14	16	20	24	28	34
210	19	23	28	33	40	48
235	27	33	39	47	56	66
260	38	46	54	65	77	92
285	53	64	76	90	106	125
310	74	88	104	123	144	169

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 35 YRS HAVE AN AVERAGE SBP OF 128 MM HG AND AN AVERAGE SERUM CHOL OF 221 MG%. 70 PERCENT SMOKE CIGARETTES, 0.0 PERCENT HAVE DEFINITE LVH BY ECG AND 2.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 10/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

40 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	7	9	11	13	15	19	12	14	17	20	24	29
	210	10	12	14	17	21	25	15	19	22	27	32	38
	235	13	16	19	23	28	33	21	25	30	36	43	51
	260	18	22	26	31	37	44	28	33	40	48	57	68
	285	24	29	35	41	49	59	37	44	53	63	75	89
	310	32	38	46	55	66	78	49	59	70	83	99	117
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	10	12	14	17	20	24	15	18	22	26	31	37
	210	13	16	19	22	27	32	20	24	29	35	41	50
	235	17	21	25	30	36	43	27	32	39	46	55	66
	260	23	28	33	40	48	57	36	43	51	61	73	87
	285	31	37	45	53	63	76	48	57	68	81	96	113
	310	42	50	59	70	84	99	63	76	90	106	125	147

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	15	19	22	27	32	38	24	29	34	41	49	59
	210	21	25	30	36	43	51	32	38	46	55	65	78
	235	28	33	40	48	57	68	43	51	61	72	86	102
	260	37	44	53	63	75	89	57	68	80	95	113	133
	285	49	59	70	83	99	116	75	89	105	124	146	171
	310	65	78	92	109	128	151	99	116	137	161	187	217
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	20	24	29	35	41	49	31	37	44	53	63	75
	210	27	32	38	46	55	65	41	49	59	70	83	99
	235	36	43	51	61	73	86	55	65	78	92	109	129
	260	48	57	68	81	96	113	73	86	102	121	142	166
	285	63	75	89	106	125	147	96	113	133	156	182	212
	310	83	99	117	137	161	188	125	147	171	200	231	266

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*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 40 YRS HAVE AN AVERAGE SBP OF 129 MM HG AND AN AVERAGE SERUM CHOL OF 229 MG%. 69 PERCENT SMOKE CIGARETTES, 0.6 PERCENT HAVE DEFINITE LVH BY ECG AND 2.6 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 23/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

45 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL \ SBP	105	120	135	150	165	180	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	15	18	21	25	31	37	23	27	33	39	47	56
	210	19	22	27	32	39	46	29	35	42	50	59	71
	235	24	29	34	41	49	59	37	44	53	63	75	89
	260	30	36	43	52	62	74	47	56	66	79	94	111
	285	38	46	55	65	78	92	59	70	83	99	117	137
	310	49	58	69	82	98	115	74	88	104	123	145	169
GLUCOSE INTOLERANCE PRESENT	185	19	23	27	33	39	47	30	35	42	51	60	72
	210	24	29	35	42	50	60	37	45	54	64	76	90
	235	31	37	44	53	63	75	47	57	68	80	95	112
	260	39	47	56	67	79	94	60	71	85	100	119	140
	285	50	59	70	84	99	117	75	90	106	125	147	172
	310	63	74	88	105	123	145	95	112	132	155	181	210

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL \ SBP	105	120	135	150	165	180	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	30	36	44	52	62	74	47	56	67	79	94	111
	210	39	46	55	66	78	93	59	70	84	99	117	138
	235	49	58	69	83	98	116	74	88	105	123	145	170
	260	62	73	87	103	122	143	93	110	130	153	178	207
	285	78	92	109	128	151	176	116	137	161	187	217	251
	310	97	115	135	159	185	215	144	169	197	228	262	300
GLUCOSE INTOLERANCE PRESENT	185	39	47	56	67	79	94	60	72	85	101	119	140
	210	50	59	71	84	99	117	76	90	106	125	147	172
	235	63	75	89	105	124	146	95	112	132	155	181	210
	260	79	94	111	130	153	179	118	139	163	190	221	254
	285	99	117	137	161	188	218	147	171	200	231	266	304
	310	123	145	169	197	229	263	180	209	242	278	317	358

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*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 45 YRS HAVE AN AVERAGE SBP OF 131 MM HG AND AN AVERAGE SERUM CHOL OF 235 MG%. 67 PERCENT SMOKE CIGARETTES, 1.3 PERCENT HAVE DEFINITE LVH BY ECG AND 3.8 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 44/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

50 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	25	30	36	43	52	62	39	46	55	66	79	93
	210	30	36	44	52	62	74	47	56	67	79	94	111
	235	37	44	52	63	74	88	56	67	80	95	112	132
	260	44	53	63	75	89	105	68	80	95	113	133	156
	285	53	64	76	90	106	125	81	96	113	134	157	183
	310	64	76	90	107	126	148	97	114	135	158	184	214

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	33	39	47	56	66	79	50	60	71	84	100	118
	210	39	47	56	67	79	94	60	72	85	101	119	140
	235	47	57	67	80	95	112	72	86	102	120	141	165
	260	57	68	81	96	113	133	86	102	121	142	166	194
	285	68	81	96	114	134	157	103	122	143	167	195	226
	310	82	97	115	135	158	185	122	144	169	196	227	262

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	52	61	73	87	103	121	78	93	110	130	152	178
	210	62	74	87	104	122	144	94	111	130	153	179	208
	235	74	88	104	123	145	169	111	131	154	180	209	242
	260	89	105	124	146	171	199	132	155	181	211	243	279
	285	106	125	147	172	200	231	156	183	212	245	281	320
	310	126	148	173	201	233	268	184	213	246	283	322	364

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	66	79	93	110	130	153	100	118	139	162	189	220
	210	79	94	111	131	154	179	119	140	164	191	221	255
	235	95	112	132	155	181	210	141	165	192	223	257	294
	260	113	133	156	182	211	244	166	193	224	258	295	336
	285	134	157	183	213	246	282	195	225	260	297	338	380
	310	158	184	214	247	283	323	227	261	299	339	382	427

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 50 YRS HAVE AN AVERAGE SBP OF 134 MM HG AND AN AVERAGE SERUM CHOL OF 236 MG%. 62 PERCENT SMOKE CIGARETTES, 2.1 PERCENT HAVE DEFINITE LVH BY ECG AND 6.3 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 70/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

55 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	37	45	53	64	76	90	57	68	81	96	113	134
	210	43	51	61	73	86	102	65	78	92	109	129	151
	235	49	58	70	83	98	116	75	89	105	124	145	170
	260	56	67	79	94	111	131	85	101	119	140	164	191
	285	64	76	91	107	126	148	97	115	135	158	185	214
	310	73	87	103	122	143	167	110	130	152	178	207	239
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	48	57	68	81	96	114	73	87	103	122	143	167
	210	55	66	78	93	109	129	84	99	117	138	161	188
	235	63	75	89	105	124	146	95	112	132	155	182	211
	260	72	85	101	119	141	165	108	128	150	175	204	236
	285	82	97	115	135	159	185	123	144	169	197	228	262
	310	93	111	130	153	179	208	139	163	190	220	254	291

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	75	89	106	125	147	172	113	133	156	182	212	245
	210	86	102	120	141	165	193	128	151	176	205	237	272
	235	98	116	136	159	186	216	145	170	198	229	263	301
	260	111	131	154	180	209	241	164	191	221	255	292	332
	285	126	148	173	202	233	268	184	214	247	283	322	365
	310	143	167	195	225	260	297	206	239	274	313	354	398
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	96	113	134	157	183	213	142	167	194	225	260	297
	210	109	129	151	177	205	237	161	188	218	251	288	328
	235	124	145	170	198	230	264	181	210	243	279	318	360
	260	140	164	191	222	256	293	203	235	270	309	350	393
	285	158	185	214	248	284	323	227	262	299	340	383	428
	310	178	207	239	275	314	355	253	290	330	373	417	463

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 55 YRS HAVE AN AVERAGE SBP OF 138 MM HG AND AN AVERAGE SERUM CHOL OF 235 MG%. 57 PERCENT SMOKE CIGARETTES, 3.7 PERCENT HAVE DEFINITE LVH BY ECG AND 7.3 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 95/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

60 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	48	57	68	81	96	113	73	87	103	121	142	167
	210	52	62	74	88	104	123	79	94	111	131	154	180
	235	57	68	81	95	113	133	86	102	121	142	166	193
	260	62	74	88	104	122	144	94	111	130	153	179	208
	285	67	80	95	112	132	155	102	120	141	165	193	223
	310	73	87	103	122	143	168	110	130	152	178	207	240
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	62	73	87	103	121	143	93	110	130	152	178	207
	210	67	80	94	112	132	154	101	119	140	164	192	222
	235	73	87	102	121	142	167	110	129	152	177	206	238
	260	79	94	111	131	154	180	119	140	164	191	221	255
	285	86	102	120	142	166	193	129	151	176	205	237	273
	310	94	111	130	153	179	208	139	163	190	220	254	291

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	96	113	133	156	182	212	142	166	194	225	259	296
	210	104	122	144	169	196	227	153	179	208	241	277	315
	235	113	133	156	182	211	244	166	193	224	258	295	335
	260	122	143	168	195	227	261	178	207	240	276	314	356
	285	132	155	181	210	243	279	192	223	257	294	334	377
	310	143	167	195	226	260	297	207	239	274	313	355	398
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	121	142	167	194	225	259	177	206	239	274	313	354
	210	131	154	180	209	241	277	191	222	255	292	333	375
	235	142	166	194	224	259	296	205	238	273	312	353	397
	260	153	179	208	241	276	315	221	254	291	331	374	419
	285	165	193	223	258	295	335	237	272	311	352	395	441
	310	178	207	240	275	314	356	253	290	330	373	417	463

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 60 YRS HAVE AN AVERAGE SBP OF 140 MM HG AND AN AVERAGE SERUM CHOL OF 235 MG%. 51 PERCENT SMOKE CIGARETTES, 5.4 PERCENT HAVE DEFINITE LVH BY ECG AND 8.3 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 111/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

65 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	53	64	76	90	107	126	81	96	114	134	157	184
	210	55	66	79	93	110	130	84	100	118	139	162	189
	235	58	69	81	97	114	134	87	103	122	143	168	196
	260	60	71	84	100	118	139	90	107	126	148	173	202
	285	62	74	87	104	122	144	94	111	130	153	179	208
	310	64	76	91	107	126	149	97	115	135	158	185	214
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	69	82	97	114	135	158	103	122	143	168	196	227
	210	71	84	100	118	139	163	107	126	148	173	202	234
	235	74	88	104	122	144	168	111	131	153	179	208	241
	260	76	91	107	127	149	174	115	135	158	185	215	248
	285	79	94	111	131	154	179	119	140	164	191	221	255
	310	82	97	115	135	159	185	123	144	169	197	228	262

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	106	125	147	172	200	232	157	183	213	246	282	321
	210	110	130	152	178	207	239	162	189	219	253	290	330
	235	114	134	157	184	213	246	167	195	226	260	298	338
	260	118	139	162	189	220	253	173	201	233	268	306	347
	285	122	143	168	195	226	261	178	207	240	275	314	356
	310	126	148	173	202	233	268	184	214	247	283	323	365
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	134	157	184	213	246	283	195	226	260	298	338	381
	210	139	163	190	220	254	290	201	233	268	306	347	391
	235	143	168	196	227	261	299	208	240	276	314	356	400
	260	148	173	202	233	269	307	214	247	283	323	365	409
	285	153	179	208	240	276	315	221	254	291	331	374	418
	310	158	185	215	248	284	323	227	262	299	340	383	428

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 65 YRS HAVE AN AVERAGE SBP OF 143 MM HG AND AN AVERAGE SERUM CHOL OF 236 MG%. 45 PERCENT SMOKE CIGARETTES, 7.9 PERCENT HAVE DEFINITE LVH BY ECG AND 9.6 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 116/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

70 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	52	62	74	88	104	123	79	94	111	131	154	180
	210	51	61	73	87	103	121	78	93	110	129	152	178
	235	51	61	72	86	102	120	77	92	109	128	150	176
	260	50	60	71	85	100	118	76	91	107	126	149	174
	285	50	59	70	84	99	117	75	90	106	125	147	172
	310	49	58	70	83	98	116	75	88	105	124	145	170

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	67	80	94	111	131	154	101	119	140	164	191	222
	210	66	79	93	110	130	152	100	118	139	162	189	220
	235	65	78	92	109	128	151	98	116	137	161	187	217
	260	64	77	91	108	127	149	97	115	135	159	185	215
	285	64	76	90	106	125	147	96	114	134	157	183	213
	310	63	75	89	105	124	146	95	112	132	155	181	211

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	104	122	144	168	196	227	153	179	208	241	276	315
	210	102	121	142	166	194	225	152	177	206	238	274	312
	235	101	119	141	165	192	223	150	175	204	236	271	309
	260	100	118	139	163	190	220	148	173	202	233	268	307
	285	99	117	137	161	188	218	146	171	200	231	266	304
	310	98	115	136	159	186	216	145	170	197	229	263	301

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL	SBP 105	120	135	150	165	180	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	131	154	180	209	241	277	191	221	255	292	332	375
	210	129	152	178	207	239	274	189	219	253	290	329	372
	235	128	150	176	204	236	272	187	217	250	287	326	369
	260	127	149	174	202	234	269	185	215	248	284	324	366
	285	125	147	172	200	232	267	183	212	245	281	321	363
	310	124	145	170	198	229	264	181	210	243	279	318	360

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 70 YRS HAVE AN AVERAGE SBP OF 145 MM HG AND AN AVERAGE SERUM CHOL OF 234 MG%. 40 PERCENT SMOKE CIGARETTES,10.4 PERCENT HAVE DEFINITE LVH BY ECG AND10.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 105/1000.

TABLE 3B-2

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

45 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	4	6	7	9	11	14	5	6	7	9	12	15
	210	5	7	9	11	14	17	6	7	9	11	14	18
	235	7	8	11	13	17	21	7	9	11	14	18	22
	260	8	10	13	16	20	26	9	11	14	17	21	27
	285	10	13	16	20	25	31	11	13	17	21	26	33
	310	12	16	20	24	31	38	13	16	20	26	32	40
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	7	8	11	13	17	21	7	9	11	14	18	22
	210	9	10	13	16	20	26	9	11	14	17	22	27
	235	10	13	16	20	25	31	11	13	17	21	26	33
	260	12	16	20	25	31	38	13	16	21	26	32	40
	285	15	19	24	30	37	47	16	20	25	31	39	49
	310	19	23	29	37	46	57	20	25	31	38	48	59

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	7	9	11	14	17	21	7	9	11	14	18	23
	210	9	11	13	17	21	26	9	11	14	18	22	28
	235	10	13	16	21	26	32	11	14	17	22	27	34
	260	13	16	20	25	31	39	13	17	21	26	33	41
	285	16	20	25	31	38	48	16	21	26	32	40	50
	310	19	24	30	37	47	58	20	25	32	39	49	61
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	10	13	16	21	26	32	11	14	17	22	27	34
	210	13	16	20	25	32	39	13	17	21	26	33	41
	235	16	20	25	31	38	48	17	21	26	32	40	50
	260	19	24	30	38	47	58	20	25	32	39	49	61
	285	24	29	37	46	57	71	25	31	39	48	60	74
	310	29	36	45	56	69	85	30	38	47	58	72	89

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 45 YRS HAVE AN AVERAGE SBP OF 128 MM HG AND AN AVERAGE SERUM CHOL OF 228 MG%. 50 PERCENT SMOKE CIGARETTES, 0.6 PERCENT HAVE DEFINITE LVH BY ECG AND 2.5 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 9/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

50 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	8	10	12	15	19	24	8	10	13	16	20	25
	210	9	12	15	18	23	29	10	12	15	19	24	30
	235	11	14	18	22	28	34	12	15	19	23	29	36
	260	13	17	21	26	33	41	14	18	22	28	35	43
	285	16	20	25	31	39	49	17	21	26	33	41	51
	310	19	24	30	38	47	58	20	25	32	39	49	61

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	12	15	19	23	29	36	12	16	19	24	30	38
	210	14	18	22	28	35	43	15	19	23	29	36	45
	235	17	21	27	33	41	51	18	22	28	35	43	54
	260	20	25	32	39	49	61	21	27	33	41	52	64
	285	24	30	38	47	58	72	25	32	40	49	61	76
	310	29	36	45	56	69	86	30	38	47	59	73	90

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	12	15	19	24	30	37	13	16	20	25	31	39
	210	14	18	23	28	35	44	15	19	24	30	37	46
	235	17	22	27	34	42	53	18	23	29	36	44	55
	260	21	26	32	40	50	62	22	27	34	42	53	65
	285	25	31	39	48	60	74	26	33	41	50	63	78
	310	30	37	46	57	71	88	31	39	48	60	74	92

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	18	23	29	36	44	55	19	24	30	37	47	58
	210	22	27	34	42	53	66	23	29	36	45	55	69
	235	26	33	41	51	63	78	27	34	43	53	66	81
	260	31	39	49	60	74	92	33	41	51	63	78	96
	285	37	46	58	71	88	108	39	49	60	75	92	113
	310	44	55	68	84	104	127	46	58	71	88	109	133

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 50 YRS HAVE AN AVERAGE SBP OF 135 MM HG AND AN AVERAGE SERUM CHOL OF 245 MG%. 43 PERCENT SMOKE CIGARETTES, 0.7 PERCENT HAVE DEFINITE LVH BY ECG AND 3.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 20/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

55 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	13	16	20	25	31	38	13	17	21	26	32	40
	210	15	18	23	29	36	45	15	19	24	30	38	47
	235	17	21	27	34	42	52	18	23	28	35	44	55
	260	20	25	31	39	49	60	21	26	33	41	51	63
	285	23	29	37	45	57	70	25	31	38	48	59	73
	310	27	34	43	53	66	81	29	36	45	55	69	85
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	19	24	30	37	46	57	20	25	31	39	48	60
	210	22	28	34	43	53	66	23	29	36	45	56	69
	235	26	32	40	50	62	77	27	34	42	52	65	80
	260	30	38	47	58	72	89	32	39	49	61	75	93
	285	35	44	54	67	83	103	37	46	57	71	87	107
	310	41	51	63	78	96	118	43	53	66	82	101	123

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	19+	24+	30	38	47	58	20+	25+	32	40	49	61
	210	23	28	35	44	55	68	24	30	37	46	57	71
	235	26	33	41	51	64	79	28	35	43	54	67	82
	260	31	38	48	59	74	91	32	40	50	62	77	95
	285	36	45	56	69	85	105	38	47	58	72	89	110
	310	42	52	65	80	98	121	44	55	68	84	103	126
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	29	36	45	56	70	86	31	38	47	59	73	90
	210	34	42	53	65	81	99	36	44	55	68	85	104
	235	40	49	61	76	93	115	41	52	64	79	98	120
	260	46	57	71	88	108	132	48	60	74	92	113	138
	285	54	66	82	101	124	151	56	70	86	106	129	157
	310	62	77	95	116	142	172	65	81	99	122	148	180

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 55 YRS HAVE AN AVERAGE SBP OF 142 MM HG AND AN AVERAGE SERUM CHOL OF 258 MG%. 34 PERCENT SMOKE CIGARETTES, 2.3 PERCENT HAVE DEFINITE LVH BY ECG AND 4.9 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 36/1000.

+THESE PROBABILITIES ARE INCONSISTENT WITH THE CORRESPONDING PROBABILITIES IN THE FOUR-YEAR FOLLOWUP.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

60 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	18	23	29	36	45	56	19	24	30	38	47	58
	210	21	26	33	41	51	63	22	28	34	43	53	66
	235	24	30	37	47	58	72	25	31	39	49	61	75
	260	27	34	43	53	66	81	29	36	45	56	69	85
	285	31	39	48	60	75	92	33	41	51	63	78	96
	310	36	44	55	68	84	104	37	46	58	72	88	109

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	28	35	43	54	66	82	29	36	45	56	70	86
	210	32	39	49	61	75	93	33	41	51	64	79	97
	235	36	45	56	69	85	105	38	47	58	72	89	110
	260	41	51	63	78	96	118	43	53	66	82	101	124
	285	47	58	72	89	109	133	49	61	75	93	114	139
	310	53	66	81	100	123	150	56	69	85	105	128	156

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	28+	35	44	55	68	84	30+	37+	46	57	71	88
	210	32+	40	50	62	77	95	34+	42	53	65	81	99
	235	37	46	57	71	87	107	39	48	60	74	91	112
	260	42	52	65	80	99	121	44	55	68	84	103	126
	285	48	59	73	91	111	136	50	62	77	95	116	142
	310	54	67	83	102	125	153	57	70	87	107	131	159

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	42	53	65	81	100	122	44	55	69	85	104	128
	210	48	60	74	92	112	137	51	63	78	96	118	143
	235	55	68	84	103	127	154	57	71	88	108	132	161
	260	62	77	95	117	142	173	65	81	99	122	149	180
	285	71	87	107	131	160	193	74	91	112	137	167	201
	310	80	99	121	147	179	215	84	103	126	154	186	223

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 60 YRS HAVE AN AVERAGE SBP OF 149 MM HG AND AN AVERAGE SERUM CHOL OF 262 MG%. 27 PERCENT SMOKE CIGARETTES, 4.0 PERCENT HAVE DEFINITE LVH BY ECG AND 6.6 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 56/1000.

+THESE PROBABILITIES ARE INCONSISTENT WITH THE CORRESPONDING PROBABILITIES IN THE FOUR-YEAR FOLLOWUP.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

65 YEAR OLD WOMAN**

DOES NOT SMOKE CIGARETTES | SMOKES CIGARETTES

--LVH-ECG NEGATIVE--

	CHOL	SBP 105	120	135	150	165	180	CHOL	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	25	31	39	48	60	74	185	26	33	41	50	63	78
	210	28	35	43	54	66	82	210	29	36	45	56	70	86
	235	31	38	48	59	74	91	235	32	40	50	62	77	95
	260	34	43	53	66	82	100	260	36	45	56	69	85	105
	285	38	48	59	73	90	111	285	40	50	62	77	95	116
	310	42	53	66	81	100	122	310	45	55	69	85	104	128

	CHOL	SBP 105	120	135	150	165	180	CHOL	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	37	46	58	71	88	108	185	39	49	60	75	92	113
	210	41	51	64	79	97	119	210	43	54	67	83	102	125
	235	46	57	71	88	108	132	235	48	60	74	92	113	138
	260	51	63	79	97	119	145	260	54	67	82	101	124	151
	285	57	70	87	107	131	159	285	60	74	91	112	137	166
	310	63	78	96	118	144	175	310	66	82	101	123	150	182

--LVH-ECG POSITIVE--

	CHOL	SBP 105	120	135	150	165	180	CHOL	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	38	47	59	73	90	111	185	40	50	62	76	94	116
	210	42	53	65	81	100	122	210	44	55	68	85	104	128
	235	47	59	73	90	110	135	235	49	61	76	94	115	140
	260	52	65	80	99	121	148	260	55	68	84	104	127	154
	285	58	72	89	109	134	163	285	61	75	93	114	140	170
	310	65	80	98	121	147	178	310	68	84	103	126	154	186

	CHOL	SBP 105	120	135	150	165	180	CHOL	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	57	70	87	107	131	159	185	59	74	91	112	136	166
	210	63	78	96	118	144	174	210	66	81	100	123	150	182
	235	70	86	106	130	158	191	235	73	90	111	136	165	199
	260	77	95	117	143	173	209	260	81	100	122	149	181	217
	285	86	105	129	157	190	228	285	90	110	135	164	198	237
	310	95	116	142	172	208	248	310	99	122	148	180	216	257

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 65 YRS HAVE AN AVERAGE SBP OF 153 MM HG AND AN AVERAGE SERUM CHOL OF 264 MG%. 22 PERCENT SMOKE CIGARETTES, 6.4 PERCENT HAVE DEFINITE LVH BY ECG AND 8.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 75/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

70 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

	DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES						
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE ABSENT	185	31	38	48	59	73	91	185	32	40	50	62	77	95
	210	33	42	52	64	80	98	210	35	44	54	67	83	103
	235	36	45	56	70	86	106	235	38	47	59	73	90	111
	260	40	49	61	76	93	115	260	41	52	64	79	98	120
	285	43	53	66	82	101	124	285	45	56	69	86	106	129
	310	47	58	72	89	109	134	310	49	61	75	93	114	139
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE PRESENT	185	46	57	71	87	107	131	185	48	60	74	91	112	137
	210	50	62	77	94	116	142	210	52	65	80	99	121	148
	235	54	67	83	102	125	152	235	57	70	87	107	131	159
	260	59	73	90	110	135	164	260	62	76	94	115	141	171
	285	64	79	97	119	146	177	285	67	83	102	125	152	184
	310	69	86	105	129	157	190	310	73	90	110	135	164	197

--LVH-ECG POSITIVE--

	DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES						
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE ABSENT	185	47	58	72	89	110	134	185	49	61	76	93	115	140
	210	51	63	78	97	118	145	210	53	66	82	101	124	151
	235	55	69	85	104	128	156	235	58	72	89	109	134	162
	260	60	74	92	113	138	168	260	63	78	96	118	144	175
	285	65	81	99	122	149	180	285	68	85	104	127	155	188
	310	71	88	108	132	160	193	310	74	92	113	138	167	201
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE PRESENT	185	69	86	106	129	157	190	185	73	90	110	135	164	198
	210	75	93	114	140	169	204	210	79	97	119	146	176	212
	235	82	101	123	150	182	219	235	86	105	129	157	190	227
	260	89	109	133	162	195	234	260	93	114	139	169	203	243
	285	96	118	144	174	210	250	285	100	123	150	181	218	260
	310	104	127	155	187	224	267	310	108	133	161	195	233	277

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 70 YRS HAVE AN AVERAGE SBP OF 157 MM HG AND AN AVERAGE SERUM CHOL OF 267 MG%. 17 PERCENT SMOKE CIGARETTES, 6.4 PERCENT HAVE DEFINITE LVH BY ECG AND11.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN SIX YEARS IS 92/1000.

TABLE 4B

PROBABILITY OF DEVELOPING CHD IN EIGHT YEARS

Men (Table 4B-1)
Women (Table 4B-2)

TABLE 4B-1

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

35 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	4	5	6	7	9	11	7	8	10	12	15	18
	210	6	7	8	10	13	15	9	11	14	17	20	24
	235	8	10	12	14	17	21	13	16	19	23	28	34
	260	11	13	16	20	24	29	18	22	26	32	38	46
	285	15	19	23	27	33	40	25	30	36	44	53	63
	310	21	26	31	38	45	55	34	41	50	60	72	86
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	5	6	8	9	11	14	8	10	12	15	18	22
	210	7	9	11	13	15	19	12	14	17	21	25	31
	235	10	12	15	18	22	26	16	20	24	29	35	42
	260	14	17	20	25	30	36	22	27	33	40	48	58
	285	19	23	28	34	41	50	31	37	45	54	65	78
	310	27	32	39	47	56	68	42	51	62	74	89	106

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	9	11	13	16	19	23	14	17	21	25	30	37
	210	12	15	18	22	26	32	20	24	29	35	42	50
	235	17	20	25	30	36	43	27	33	39	47	57	69
	260	23	28	34	41	49	59	37	45	54	65	78	93
	285	32	39	47	56	67	81	51	61	74	88	105	125
	310	44	53	64	76	91	109	69	83	99	118	140	166
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	11	13	16	20	24	29	18	21	26	31	38	46
	210	15	18	22	27	33	39	24	30	36	43	52	63
	235	21	25	31	37	45	54	34	41	49	59	71	85
	260	29	35	42	51	61	74	46	56	67	80	96	114
	285	40	48	58	70	83	100	63	76	91	108	129	152
	310	55	66	79	94	112	133	86	102	122	145	170	200

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 35 YRS HAVE AN AVERAGE SBP OF 128 MM HG AND AN AVERAGE SERUM CHOL OF 221 MG%. 70 PERCENT SMOKE CIGARETTES, 0.0 PERCENT HAVE DEFINITE LVH BY ECG AND 2.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS IS 13/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

40 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

DOES NOT SMOKE CIGARETTES

GLUCOSE INTOLERANCE ABSENT

CHOL \ SBP	105	120	135	150	165	180
185	10	12	14	18	21	26
210	13	16	19	23	28	34
235	17	21	25	30	37	44
260	23	27	33	40	48	58
285	30	36	43	52	63	75
310	39	47	56	68	81	97

SMOKES CIGARETTES

GLUCOSE INTOLERANCE ABSENT

CHOL \ SBP	105	120	135	150	165	180
185	16	19	23	28	34	41
210	21	25	31	37	45	54
235	28	33	40	48	58	70
260	36	44	53	63	76	91
285	47	57	68	82	98	117
310	62	74	89	106	126	149

DOES NOT SMOKE CIGARETTES

GLUCOSE INTOLERANCE PRESENT

CHOL \ SBP	105	120	135	150	165	180
185	12	15	18	22	27	32
210	16	20	24	29	35	42
235	21	26	31	38	45	55
260	28	34	41	50	60	72
285	37	45	54	65	78	93
310	48	58	70	84	100	119

SMOKES CIGARETTES

GLUCOSE INTOLERANCE PRESENT

CHOL \ SBP	105	120	135	150	165	180
185	20	24	29	35	43	51
210	26	32	38	46	56	67
235	34	41	50	60	72	87
260	45	54	65	78	94	111
285	59	71	84	101	120	142
310	76	91	109	129	153	180

--LVH-ECG POSITIVE--

DOES NOT SMOKE CIGARETTES

GLUCOSE INTOLERANCE ABSENT

CHOL \ SBP	105	120	135	150	165	180
185	21	25	30	36	44	53
210	27	33	40	48	57	69
235	36	43	52	62	75	89
260	47	56	67	81	96	115
285	61	73	87	104	124	147
310	79	94	112	133	158	185

SMOKES CIGARETTES

GLUCOSE INTOLERANCE ABSENT

CHOL \ SBP	105	120	135	150	165	180
185	33	40	48	58	70	83
210	43	52	63	75	90	108
235	57	68	81	97	116	138
260	73	88	105	125	148	174
285	95	113	134	159	187	218
310	122	145	170	200	233	270

DOES NOT SMOKE CIGARETTES

GLUCOSE INTOLERANCE PRESENT

CHOL \ SBP	105	120	135	150	165	180
185	26	31	38	45	55	66
210	34	41	49	59	71	85
235	44	53	64	77	92	110
260	58	69	83	99	118	140
285	75	90	107	128	151	178
310	97	116	137	162	191	223

SMOKES CIGARETTES

GLUCOSE INTOLERANCE PRESENT

CHOL \ SBP	105	120	135	150	165	180
185	41	50	60	72	86	103
210	54	65	78	93	111	132
235	70	84	100	119	142	167
260	91	108	129	152	179	210
285	117	138	163	192	224	260
310	149	175	205	239	277	318

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 40 YRS HAVE AN AVERAGE SBP OF 129 MM HG AND AN AVERAGE SERUM CHOL OF 229 MG%. 69 PERCENT SMOKE CIGARETTES, 0.6 PERCENT HAVE DEFINITE LVH BY ECG AND 2.6 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS IS 31/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

45 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	20	24	29	35	42	51	32	39	46	56	67	81
	210	25	30	36	44	53	64	40	48	58	69	83	99
	235	31	38	45	55	66	79	50	60	72	86	103	122
	260	39	47	56	68	81	97	62	74	89	106	126	149
	285	48	58	70	84	100	119	76	92	109	130	153	181
	310	60	72	87	104	123	146	94	113	134	158	186	217
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	25	30	36	44	53	64	40	48	58	69	83	99
	210	31	38	45	55	66	79	50	60	72	86	102	122
	235	39	47	56	68	81	97	62	74	89	106	126	149
	260	48	58	70	84	100	119	76	91	109	130	153	181
	285	60	72	87	103	123	146	94	112	134	158	186	217
	310	75	89	107	127	150	177	116	138	163	191	223	259

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	41	50	60	72	86	102	65	78	93	111	132	157
	210	51	62	74	89	106	126	81	96	115	136	161	189
	235	64	76	91	109	130	153	100	118	141	166	195	227
	260	79	94	112	134	158	186	122	145	171	200	234	270
	285	97	116	138	163	191	223	149	176	206	240	277	318
	310	120	142	167	196	229	266	181	212	246	284	326	370
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	51	62	74	88	105	126	81	96	115	136	161	189
	210	64	76	91	109	129	153	99	118	140	166	195	227
	235	79	94	112	133	158	186	122	145	171	200	233	270
	260	97	116	137	162	191	223	149	176	206	240	277	318
	285	119	142	167	196	229	265	181	211	246	284	325	370
	310	146	172	202	235	272	313	217	252	291	333	378	425

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 45 YRS HAVE AN AVERAGE SBP OF 131 MM HG AND AN AVERAGE SERUM CHOL OF 235 MG%. 67 PERCENT SMOKE CIGARETTES, 1.3 PERCENT HAVE DEFINITE LVH BY ECG AND 3.8 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS IS 60/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

50 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

	DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES						
	CHOL \ SBP	105	120	135	150	165	180	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	34	41	50	60	72	86	185	54	65	78	93	111	132
	210	41	49	59	71	85	101	210	64	77	92	110	131	155
	235	48	58	70	83	100	119	235	76	91	108	129	153	180
	260	57	69	82	98	117	139	260	90	107	127	151	177	208
	285	68	81	97	116	137	162	285	106	126	149	175	205	239
	310	80	96	114	135	160	188	310	124	147	173	203	236	274
	CHOL \ SBP	105	120	135	150	165	180	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	42	51	62	74	88	106	185	67	81	96	115	136	161
	210	50	61	73	87	104	124	210	79	95	113	134	159	187
	235	60	72	86	103	122	145	235	94	112	133	157	185	216
	260	71	85	101	121	143	169	260	110	131	155	182	213	248
	285	84	100	119	141	167	196	285	129	153	180	211	245	283
	310	99	117	139	165	193	226	310	151	178	208	242	280	321

--LVH-ECG POSITIVE--

	DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES						
	CHOL \ SBP	105	120	135	150	165	180	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	69	83	99	118	140	166	185	108	129	152	179	210	244
	210	82	98	117	139	164	192	210	127	150	177	207	241	279
	235	97	115	137	162	190	222	235	148	175	205	239	276	317
	260	114	135	160	188	219	255	260	173	202	236	273	313	357
	285	133	157	185	217	252	290	285	200	233	270	310	354	399
	310	155	183	214	249	287	329	310	230	267	307	350	396	443
	CHOL \ SBP	105	120	135	150	165	180	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	86	102	122	144	170	200	185	132	156	184	215	250	289
	210	101	120	143	168	198	230	210	154	182	213	247	286	327
	235	119	141	166	195	228	264	235	180	210	245	283	324	368
	260	139	164	193	225	261	301	260	208	242	280	321	365	411
	285	162	190	222	258	297	340	285	239	276	317	361	408	456
	310	188	220	255	294	336	381	310	273	314	358	404	452	501

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*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 50 YRS HAVE AN AVERAGE SBP OF 134 MM HG AND AN AVERAGE SERUM CHOL OF 236 MG%. 62 PERCENT SMOKE CIGARETTES, 2.1 PERCENT HAVE DEFINITE LVH BY ECG AND 6.3 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALU THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS IS 94/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

55 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

DOES NOT SMOKE CIGARETTES

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	50	60	72	86	103	122
	210	56	68	81	97	116	137
	235	64	76	91	109	130	153
	260	72	86	103	122	145	171
	285	81	97	116	137	162	190
	310	91	109	130	153	181	211

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	62	74	89	106	126	149
	210	70	84	100	119	141	167
	235	79	94	112	133	158	186
	260	89	106	126	149	176	206
	285	100	119	141	167	196	228
	310	112	133	158	186	217	252

SMOKES CIGARETTES

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	78	94	112	133	157	185
	210	88	106	126	149	175	205
	235	100	119	141	166	195	227
	260	112	133	157	185	216	251
	285	126	149	175	205	239	277
	310	141	166	195	228	264	304

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	97	115	137	162	190	222
	210	109	129	153	180	211	245
	235	122	145	171	200	233	270
	260	137	162	190	222	258	297
	285	153	180	211	245	283	325
	310	171	200	233	270	311	354

--LVH-ECG POSITIVE--

DOES NOT SMOKE CIGARETTES

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	100	119	141	166	195	228
	210	112	133	157	185	217	252
	235	126	149	176	206	240	277
	260	141	166	195	228	264	304
	285	158	185	217	252	290	332
	310	176	206	240	277	318	362

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	122	145	171	201	234	271
	210	137	162	190	222	258	297
	235	153	180	211	246	284	325
	260	171	201	234	271	311	355
	285	190	222	258	297	340	385
	310	211	246	284	325	370	417

SMOKES CIGARETTES

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	153	180	210	245	283	324
	210	170	200	233	270	310	353
	235	190	222	257	296	339	384
	260	211	245	283	324	369	415
	285	233	270	310	354	400	447
	310	257	296	339	384	431	480

	CHOL \ SBP	105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	185	216	251	290	332	376
	210	205	239	276	317	361	407
	235	227	264	303	346	392	439
	260	251	290	332	376	423	472
	285	277	317	361	408	456	504
	310	303	346	392	439	488	537

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 55 YRS HAVE AN AVERAGE SBP OF 138 MM HG AND AN AVERAGE SERUM CHOL OF 235 MG%. 57 PERCENT SMOKE CIGARETTES, 3.7 PERCENT HAVE DEFINITE LVH BY ECG AND 7.3 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS IS 126/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

60 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE ABSENT	185	62	75	89	107	127	150	185	97	116	138	163	191	223
	210	67	81	96	115	136	161	210	105	125	148	174	204	238
	235	72	87	104	123	146	172	235	113	134	158	186	217	253
	260	78	93	111	132	155	184	260	121	143	169	198	231	268
	285	84	100	120	142	167	196	285	130	154	181	212	246	284
	310	90	108	128	152	179	209	310	139	164	193	225	261	301
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE PRESENT	185	77	92	110	131	155	182	185	119	142	167	196	229	265
	210	83	99	118	140	165	194	210	128	152	179	209	244	282
	235	89	107	127	150	177	207	235	138	163	191	223	259	298
	260	96	115	136	161	189	221	260	147	174	204	237	275	315
	285	103	123	146	172	202	235	285	158	186	217	252	291	333
	310	111	132	156	184	215	250	310	169	198	231	268	308	351

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES							SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE ABSENT	185	123	146	172	202	235	272	185	186	217	253	291	333	378
	210	132	156	184	215	250	289	210	198	231	268	308	352	397
	235	142	167	196	229	266	306	235	212	246	284	326	370	417
	260	152	179	209	244	282	323	260	225	261	301	344	389	437
	285	163	191	223	259	298	341	285	240	277	318	362	409	457
	310	174	204	238	275	316	359	310	255	294	336	381	428	477
	SBP	105	120	135	150	165	180	SBP	105	120	135	150	165	180
	CHOL							CHOL						
GLUCOSE INTOLERANCE PRESENT	185	150	177	207	241	279	320	185	223	259	298	341	386	433
	210	161	189	221	256	296	338	210	237	275	315	359	405	453
	235	172	202	235	272	313	356	235	252	291	333	378	425	473
	260	184	215	250	288	330	375	260	268	308	351	397	445	494
	285	196	229	265	305	348	394	285	284	326	370	417	465	514
	310	209	244	282	323	367	414	310	301	344	389	436	485	534

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 60 YRS HAVE AN AVERAGE SBP OF 140 MM HG AND AN AVERAGE SERUM CHOL OF 235 MG%. 51 PERCENT SMOKE CIGARETTES, 5.4 PERCENT HAVE DEFINITE LVH BY ECG AND 8.3 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS IS 144/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

65 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL \ SBP	105	120	135	150	165	180	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	67	80	96	115	136	161	105	124	147	174	204	237
	210	69	83	99	118	140	165	107	128	151	178	209	243
	235	71	85	102	121	143	169	111	131	155	183	214	249
	260	73	88	104	124	147	174	114	135	159	187	219	254
	285	75	90	107	128	151	178	117	139	164	192	224	260
	310	77	93	110	131	155	183	120	142	168	197	230	266
GLUCOSE INTOLERANCE PRESENT	185	83	99	118	140	165	194	128	152	179	209	243	281
	210	85	102	121	144	169	199	132	156	183	214	249	287
	235	88	105	125	148	174	204	135	160	188	220	255	294
	260	90	108	128	151	178	209	139	164	193	225	261	300
	285	93	111	131	155	183	214	143	168	197	230	267	307
	310	95	114	135	160	188	219	146	173	202	236	273	314

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	CHOL \ SBP	105	120	135	150	165	180	105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	132	156	184	215	250	288	198	231	268	308	351	397
	210	136	160	188	220	256	295	203	237	274	314	358	404
	235	139	164	193	226	262	301	208	242	280	321	365	412
	260	143	169	198	231	268	308	213	248	286	328	373	419
	285	147	173	203	237	274	314	219	254	293	335	380	427
	310	151	178	208	242	280	321	224	260	299	342	387	435
GLUCOSE INTOLERANCE PRESENT	185	161	189	221	256	295	337	237	274	315	359	405	453
	210	165	193	226	262	302	344	243	281	322	366	412	461
	235	169	198	231	268	308	351	248	287	329	373	420	468
	260	173	203	237	274	315	359	254	293	335	380	428	476
	285	178	208	243	280	322	366	260	300	342	388	435	484
	310	183	214	248	287	328	373	266	306	349	395	443	491

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 65 YRS HAVE AN AVERAGE SBP OF 143 MM HG AND AN AVERAGE SERUM CHOL OF 236 MG%. 45 PERCENT SMOKE CIGARETTES, 7.9 PERCENT HAVE DEFINITE LVH BY ECG AND 9.6 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS IS 145/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

70 YEAR OLD MAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	62	75	89	107	127	150	97	116	138	163	191	223
	210	61	73	88	105	125	148	96	114	135	160	188	220
	235	60	72	86	103	123	145	94	112	133	157	185	217
	260	59	71	85	101	121	143	92	110	131	155	182	213
	285	58	70	83	100	119	141	91	108	129	153	180	210
	310	57	68	82	98	117	139	89	107	127	150	177	207
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	77	92	110	131	154	182	119	142	167	196	229	265
	210	76	91	108	128	152	179	117	139	165	193	226	262
	235	74	89	106	126	150	176	116	137	162	190	222	258
	260	73	88	105	124	147	174	114	135	159	187	219	255
	285	72	86	103	122	145	171	112	133	157	185	216	251
	310	71	85	101	120	143	168	110	131	154	182	213	247

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	123	146	172	202	235	272	186	217	252	291	333	378
	210	121	144	169	199	232	268	183	214	249	287	329	374
	235	119	141	167	196	228	265	180	211	245	283	325	369
	260	117	139	164	193	225	261	177	208	242	280	321	365
	285	115	137	162	190	222	258	175	205	238	276	317	360
	310	113	135	159	187	219	254	172	202	235	272	313	356
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	150	177	207	241	279	320	223	259	298	341	386	433
	210	148	174	204	238	275	316	220	255	294	336	381	429
	235	145	171	201	234	271	312	217	252	290	332	377	424
	260	143	169	198	231	268	308	213	248	286	328	373	419
	285	141	166	195	228	264	304	210	245	283	324	368	415
	310	138	164	192	224	260	300	207	241	279	320	364	410

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM MEN AGED 70 YRS HAVE AN AVERAGE SBP OF 145 MM HG AND AN AVERAGE SERUM CHOL OF 234 MG%. 40 PERCENT SMOKE CIGARETTES,10.4 PERCENT HAVE DEFINITE LVH BY ECG AND10.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS IS 127/1000.

TABLE 48-2

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

45 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	7	9	10	13	15	18	7	9	11	13	16	19
	210	8	10	12	15	18	22	9	11	13	15	19	22
	235	10	12	15	18	21	26	10	13	15	18	22	27
	260	12	15	18	21	25	31	12	15	18	22	26	32
	285	14	17	21	25	30	36	15	18	22	26	31	37
	310	17	21	25	30	36	43	18	21	26	31	37	44
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	12	15	18	22	26	31	13	15	19	22	27	32
	210	15	18	21	26	31	37	15	18	22	27	32	38
	235	18	21	25	31	37	44	18	22	26	32	38	45
	260	21	25	30	36	43	52	22	26	31	37	45	54
	285	25	30	36	43	51	62	26	31	37	44	53	64
	310	29	35	42	51	61	73	30	37	44	53	63	75

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	11	13	16	19	23	28	11	14	16	20	24	29
	210	13	16	19	23	27	33	13	16	20	24	28	34
	235	15	19	22	27	32	39	16	19	23	28	34	40
	260	18	22	27	32	39	46	19	23	28	33	40	48
	285	22	26	32	38	46	55	23	27	33	39	47	57
	310	26	31	38	45	54	65	27	32	39	47	56	67
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	19	23	27	33	39	47	20	24	28	34	41	49
	210	22	27	33	39	47	56	23	28	34	40	48	58
	235	27	32	39	46	55	66	28	33	40	48	57	68
	260	32	38	46	55	65	78	33	39	47	57	68	81
	285	38	45	54	65	77	92	39	47	56	67	80	95
	310	45	53	64	76	91	108	46	55	66	79	94	111

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 45 YRS HAVE AN AVERAGE SBP OF 128 MM HG AND AN AVERAGE SERUM CHOL OF 228 MG%. 50 PERCENT SMOKE CIGARETTES, 0.6 PERCENT HAVE DEFINITE LVH BY ECG AND 2.5 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS IS 13/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

50 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	13	16	19	23	27	33	14	16	20	24	28	34
	210	15	18	22	27	32	38	16	19	23	27	33	40
	235	18	21	26	31	37	45	18	22	27	32	38	46
	260	21	25	30	36	43	52	21	26	31	37	45	53
	285	24	29	35	42	50	60	25	30	36	43	52	62
	310	28	34	40	48	58	69	29	35	42	50	60	71

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	23	27	33	39	47	56	23	28	34	41	49	58
	210	26	32	38	45	54	65	27	33	39	47	56	67
	235	31	37	44	53	63	75	32	38	45	54	65	78
	260	35	43	51	61	73	87	37	44	53	63	75	89
	285	41	49	59	70	84	100	43	51	61	73	87	103
	310	48	57	68	81	97	115	49	59	70	84	100	118

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE ABSENT	185	20	24	29	35	42	50	21	25	30	36	43	52
	210	23	28	34	40	48	58	24	29	35	42	50	60
	235	27	33	39	47	56	67	28	34	40	48	58	69
	260	31	38	45	54	65	77	33	39	47	56	67	80
	285	37	44	52	63	75	89	38	45	54	65	77	92
	310	42	51	61	72	86	102	44	52	63	75	89	106

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
GLUCOSE INTOLERANCE PRESENT	185	34	41	49	59	71	84	36	43	51	61	73	87
	210	40	48	57	68	81	97	41	49	59	71	84	100
	235	46	55	66	79	94	111	48	57	68	81	97	115
	260	54	64	76	91	108	127	55	66	79	94	111	131
	285	62	74	88	105	124	146	64	76	91	108	127	150
	310	72	85	101	120	141	166	74	88	105	124	146	171

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 50 YRS HAVE AN AVERAGE SBP OF 135 MM HG AND AN AVERAGE SERUM CHOL OF 245 MG%. 43 PERCENT SMOKE CIGARETTES, 0.7 PERCENT HAVE DEFINITE LVH BY ECG AND 3.1 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS IS 28/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

55 YEAR OLD WOMAN**

DOES NOT SMOKE CIGARETTES

SMOKES CIGARETTES

--LVH-ECG NEGATIVE--

DOES NOT SMOKE CIGARETTES

	CHOL	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	22	26	31	37	45	54
	210	25	30	35	43	51	61
	235	29	34	40	49	58	69
	260	32	38	46	55	65	78
	285	36	43	52	62	74	88
	310	41	49	59	70	84	99

	CHOL	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	37	44	53	64	76	90
	210	42	50	60	72	86	102
	235	48	57	68	81	97	114
	260	54	65	77	92	109	129
	285	61	73	87	103	122	144
	310	69	83	98	116	137	161

SMOKES CIGARETTES

CHOL	SBP 105	120	135	150	165	180
185	22	27	32	39	46	56
210	25	31	37	44	53	63
235	29	35	42	50	60	71
260	33	39	47	57	68	81
285	37	45	54	64	76	91
310	42	51	61	72	86	102

CHOL	SBP 105	120	135	150	165	180
185	38	46	55	66	78	93
210	43	52	62	74	88	105
235	49	59	70	84	100	118
260	56	67	80	95	112	133
285	63	76	90	107	126	149
310	72	85	101	120	141	166

--LVH-ECG POSITIVE--

DOES NOT SMOKE CIGARETTES

	CHOL	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE ABSENT	185	33	39	47	57	68	80
	210	37	45	54	64	76	91
	235	42	51	61	72	86	102
	260	48	58	69	82	97	115
	285	54	65	78	92	110	129
	310	62	74	88	104	123	145

	CHOL	SBP 105	120	135	150	165	180
GLUCOSE INTOLERANCE PRESENT	185	56	67	80	95	112	132
	210	63	76	90	107	126	148
	235	72	85	101	120	141	166
	260	81	96	114	135	158	185
	285	91	108	128	151	177	206
	310	103	122	144	168	197	228

SMOKES CIGARETTES

CHOL	SBP 105	120	135	150	165	180
185	34	41	49	58	70	83
210	39	46	55	66	79	94
235	44	52	63	75	89	106
260	50	59	71	84	100	119
285	56	67	80	95	113	133
310	64	76	90	107	127	149

CHOL	SBP 105	120	135	150	165	180
185	58	69	82	98	116	137
210	65	78	93	110	130	153
235	74	88	104	124	146	171
260	84	99	118	139	163	190
285	94	112	132	155	182	212
310	106	126	148	173	202	235

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 55 YRS HAVE AN AVERAGE SBP OF 142 MM HG AND AN AVERAGE SERUM CHOL OF 258 MG%. 34 PERCENT SMOKE CIGARETTES, 2.3 PERCENT HAVE DEFINITE LVH BY ECG AND 4.9 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS IS 52/1000.

PROBABILITY* OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS BY SEX, AGE, SYSTOLIC BLOOD PRESSURE, CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ECG, CIGARETTE SMOKING AND GLUCOSE INTOLERANCE: THE FRAMINGHAM STUDY, 16-YEAR FOLLOW-UP

60 YEAR OLD WOMAN**

--LVH-ECG NEGATIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
	185	32	38	46	55	66	79	33	40	48	57	68	81
GLUCOSE INTOLERANCE ABSENT	210	36	43	51	61	73	87	37	44	53	63	75	90
	235	40	47	57	68	81	96	41	49	59	70	83	99
	260	44	53	63	75	89	106	45	54	65	77	92	109
	285	49	58	70	83	99	117	50	60	72	86	102	120
	310	54	65	77	92	109	129	56	67	80	95	112	133
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
	185	55	65	78	92	110	129	56	67	80	95	113	133
GLUCOSE INTOLERANCE PRESENT	210	60	72	86	102	121	142	62	75	89	105	124	147
	235	67	80	95	113	133	156	69	82	98	116	137	161
	260	74	88	105	124	146	171	77	91	108	128	150	176
	285	82	98	116	136	160	187	85	101	119	141	165	193
	310	91	105	127	150	176	205	94	111	131	154	181	210

--LVH-ECG POSITIVE--

		DOES NOT SMOKE CIGARETTES						SMOKES CIGARETTES					
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
	185	48	58	69	82	98	116	50	60	71	85	101	120
GLUCOSE INTOLERANCE ABSENT	210	54	64	77	91	108	128	56	66	79	94	111	132
	235	60	71	85	101	119	140	62	73	87	104	123	145
	260	66	79	94	111	131	154	68	81	97	114	135	159
	285	73	87	103	122	144	169	76	90	107	126	148	174
	310	81	96	114	135	158	185	84	99	118	139	163	190
	SBP	105	120	135	150	165	180	105	120	135	150	165	180
	CHOL												
	185	82	97	115	135	159	186	84	100	118	140	164	192
GLUCOSE INTOLERANCE PRESENT	210	90	107	126	149	174	203	93	110	130	153	180	209
	235	100	118	139	163	191	222	103	122	143	168	196	228
	260	110	130	153	179	208	241	113	134	157	184	214	248
	285	121	143	167	196	227	262	125	147	172	201	233	269
	310	133	157	183	213	247	284	137	161	189	219	253	291

*PROBABILITY IS SHOWN IN THOUSANDTHS.

**FRAMINGHAM WOMEN AGED 60 YRS HAVE AN AVERAGE SBP OF 149 MM HG AND AN AVERAGE SERUM CHOL OF 262 MG%. 27 PERCENT SMOKE CIGARETTES, 4.0 PERCENT HAVE DEFINITE LVH BY ECG AND 6.6 PERCENT HAVE GLUCOSE INTOLERANCE. AT THESE AVERAGE VALUES THE PROBABILITY OF DEVELOPING CORONARY HEART DISEASE IN EIGHT YEARS IS 79/1000.

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	33	1.000	1.000	1.000
NONE	1288	3	0.292	0.465	0.434
UNDER 20	644	4	0.781	0.716	0.691
20	1142	13	1.439	1.103	1.100
OVER 20	1082	13	1.519	1.698	1.752

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4316	0.1568	2.75
(2) MULTIVARIATE	0.4653	0.1701	2.74

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	108	1.000	1.000	1.000
NONE	2120	23	0.570	0.660	0.630
UNDER 20	822	13	0.835	0.863	0.845
20	1383	39	1.507	1.127	1.134
OVER 20	1393	33	1.260	1.472	1.522

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.2672	0.0805	3.32
(2) MULTIVARIATE	0.2943	0.0839	3.51

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	165	1.000	1.000	1.000
NONE	1930	65	0.811	0.871	0.796
UNDER 20	664	31	1.139	0.987	0.969
20	788	36	1.114	1.117	1.180
OVER 20	622	33	1.304	1.265	1.438

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.1242	0.0664	1.87
(2) MULTIVARIATE	0.1972	0.0680	2.90

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	47	1.000	1.000	1.000
NONE	690	28	0.997	0.968	0.951
UNDER 20	215	7	0.793	1.012	1.017
20	144	7	1.205	1.059	1.089
OVER 20	106	5	1.167	1.107	1.165

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0450	0.1438	0.31
(2) MULTIVARIATE	0.0677	0.1449	0.47

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	33	1.000	1.000	1.000
NO	4014	31	0.972	0.990	0.992
POSSIBLE	119	2	2.136	1.235	1.185
DEFINITE	23	0	0.0	1.541	1.415

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.2213	0.6148	0.36
(2) MULTIVARIATE	0.1775	0.6868	0.26

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	108	1.000	1.000	1.000
NO	5360	97	0.957	0.959	0.980
POSSIBLE	246	6	1.299	1.410	1.212
DEFINITE	112	5	2.427	2.074	1.499

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.3858	0.2114	1.82
(2) MULTIVARIATE	0.2126	0.2318	0.92

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	165	1.000	1.000	1.000
NO	3583	130	0.876	0.850	0.896
POSSIBLE	252	10	0.961	1.652	1.489
DEFINITE	169	25	4.039	3.210	2.475

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.6645	0.1157	5.74
(2) MULTIVARIATE	0.5081	0.1293	3.93

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	47	1.000	1.000	1.000
NO	988	37	0.917	0.903	0.929
POSSIBLE	91	4	1.084	1.307	1.236
DEFINITE	76	6	2.021	1.891	1.644

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.3696	0.2215	1.67
(2) MULTIVARIATE	0.2855	0.2505	1.14

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                     RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
                    OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

                EVENT:  CORONARY HEART DISEASE
       CHARACTERISTIC:  GLUCOSE INTOLERANCE
    CONTROL VARIABLES:  SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
                        LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

                 MEN AGED 35-44 AT EXAM                                         MEN AGED 45-54 AT EXAM

            NUMBER        RELATIVE AVERAGE ODDS                           NUMBER        RELATIVE AVERAGE ODDS
  LEVEL   AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2        LEVEL   AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2

    TOTAL   4156     33   1.000     1.000       1.000             TOTAL   5718    108   1.000     1.000       1.000

  NO        4036     32   0.999     1.003       1.002           NO        5407     95   0.929     0.938       0.937
  YES        120      1   1.050     0.911       0.916           YES        311     13   2.266     2.078       2.091

                    B      SE(B)   B/SE(B)                                        B      SE(B)   B/SE(B)

(1) UNIVARIATE   -0.0963  1.0179  -0.09                       (1) UNIVARIATE    0.7954  0.3001   2.65
(2) MULTIVARIATE -0.0903  1.0502  -0.09                       (2) MULTIVARIATE  0.8025  0.3065   2.62

                 MEN AGED 55-64 AT EXAM                                         MEN AGED 65-74 AT EXAM

            NUMBER        RELATIVE AVERAGE ODDS                           NUMBER        RELATIVE AVERAGE ODDS
  LEVEL   AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2        LEVEL   AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2

    TOTAL   4004    165   1.000     1.000       1.000             TOTAL   1155     47   1.000     1.000       1.000

  NO        3690    147   0.965     0.957       0.981           NO        1040     37   0.870     0.862       0.859
  YES        314     18   1.415     1.508       1.222           YES        115     10   2.245     2.246       2.276

                    B      SE(B)   B/SE(B)                                        B      SE(B)   B/SE(B)

(1) UNIVARIATE    0.4549  0.2452   1.86                       (1) UNIVARIATE    0.9574  0.3709   2.58
(2) MULTIVARIATE  0.2193  0.2625   0.84                       (2) MULTIVARIATE  0.9743  0.3758   2.59
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TABLE 1A-2

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5110	7	1.000	1.000	1.000
74-109	961	0	0.0	0.412	0.479
110-119	1356	0	0.0	0.592	0.657
120-129	1218	4	2.402	0.825	0.876
130-139	795	0	0.0	1.136	1.156
140-149	401	1	1.822	1.600	1.556
150-159	205	1	3.574	2.185	2.039
160-169	89	0	0.0	3.005	2.689
170-179	41	0	0.0	4.306	3.674
180-189	23	0	0.0	5.896	4.826
190-300	21	1	36.450	15.989	10.937

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0332	0.0123	2.69
(2) MULTIVARIATE	0.0288	0.0146	1.97

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	7350	35	1.000	1.000	1.000
74-109	680	4	1.237	0.526	0.606
110-119	1275	3	0.493	0.642	0.712
120-129	1459	7	1.008	0.759	0.815
130-139	1430	5	0.733	0.898	0.934
140-149	913	5	1.151	1.069	1.075
150-159	630	3	1.000	1.261	1.228
160-169	368	2	1.142	1.493	1.408
170-179	241	2	1.749	1.769	1.615
180-189	170	1	1.237	2.096	1.852
190-300	184	3	3.464	3.692	2.871

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0171	0.0046	3.70
(2) MULTIVARIATE	0.0138	0.0060	2.29

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5469	105	1.000	1.000	1.000
74-109	215	1	0.239	0.366	0.413
110-119	505	2	0.203	0.455	0.503
120-129	749	10	0.691	0.551	0.596
130-139	915	10	0.564	0.665	0.706
140-149	801	11	0.711	0.807	0.840
150-159	736	12	0.847	0.979	0.998
160-169	519	14	1.416	1.181	1.182
170-179	375	16	2.277	1.428	1.401
180-189	278	9	1.709	1.724	1.658
190-300	376	20	2.870	3.044	2.731

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0194	0.0029	6.79
(2) MULTIVARIATE	0.0174	0.0032	5.43

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	1739	44	1.000	1.000	1.000
74-109	33	0	0.0	0.357	0.494
110-119	99	1	0.393	0.438	0.572
120-129	148	3	0.797	0.518	0.644
130-139	244	5	0.806	0.628	0.738
140-149	287	7	0.963	0.742	0.831
150-159	256	5	0.767	0.888	0.943
160-169	218	0	0.0	1.051	1.063
170-179	168	1	0.231	1.255	1.206
180-189	111	9	3.399	1.509	1.375
190-300	175	13	3.091	2.321	1.850

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0179	0.0050	3.58
(2) MULTIVARIATE	0.0127	0.0055	2.32

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5110	7	1.000	1.000	1.000
96-189	1457	0	0.0	0.186	0.170
190-204	890	0	0.0	0.317	0.293
205-219	743	2	1.968	0.449	0.419
220-234	675	0	0.0	0.629	0.592
235-249	490	1	1.491	0.892	0.847
250-264	316	0	0.0	1.221	1.169
265-279	221	1	3.314	1.737	1.679
280-294	151	1	4.860	2.445	2.383
295-309	76	0	0.0	3.522	3.467
310-696	91	2	16.382	21.466	23.207

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0227	0.0043	5.31
(2) MULTIVARIATE	0.0233	0.0050	4.70

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	35	1.000	1.000	1.000
96-189	741	1	0.282	0.642	0.716
190-204	721	3	0.873	0.732	0.795
205-219	888	6	1.422	0.798	0.850
220-234	1092	2	0.383	0.868	0.908
235-249	965	6	1.308	0.944	0.970
250-264	821	3	0.767	1.024	1.034
265-279	690	1	0.303	1.114	1.104
280-294	511	3	1.234	1.214	1.181
295-309	331	4	2.557	1.320	1.262
310-696	590	6	2.147	1.884	1.579

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0056	0.0019	2.94
(2) MULTIVARIATE	0.0044	0.0020	2.21

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	105	1.000	1.000	1.000
96-189	220	6	1.432	0.613	0.639
190-204	289	2	0.356	0.694	0.717
205-219	435	6	0.714	0.750	0.769
220-234	689	11	0.829	0.811	0.827
235-249	666	8	0.621	0.878	0.889
250-264	749	11	0.761	0.947	0.954
265-279	702	16	1.192	1.024	1.025
280-294	558	13	1.219	1.110	1.104
295-309	408	10	1.284	1.205	1.190
310-696	753	22	1.537	1.492	1.447

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0053	0.0020	2.65
(2) MULTIVARIATE	0.0049	0.0020	2.45

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	44	1.000	1.000	1.000
96-189	47	1	0.837	0.290	0.297
190-204	69	1	0.567	0.402	0.409
205-219	123	0	0.0	0.471	0.479
220-234	198	4	0.794	0.560	0.568
235-249	222	4	0.707	0.667	0.674
250-264	237	3	0.494	0.788	0.794
265-279	250	6	0.947	0.938	0.942
280-294	184	5	1.076	1.133	1.134
295-309	139	7	2.043	1.332	1.329
310-696	270	13	1.949	2.095	2.070

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0117	0.0032	3.70
(2) MULTIVARIATE	0.0115	0.0032	3.61

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5110	7	1.000	1.000	1.000
NONE	2325	2	0.628	0.590	0.545
UNDER 20	1656	2	0.881	0.973	0.954
20	828	2	1.765	1.605	1.670
OVER 20	301	1	2.430	2.646	2.924

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.5000	0.3675	1.36
(2) MULTIVARIATE	0.5600	0.3853	1.45

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	35	1.000	1.000	1.000
NONE	4126	18	0.916	0.906	0.809
UNDER 20	1776	8	0.946	1.034	1.051
20	1040	4	0.807	1.179	1.366
OVER 20	408	5	2.593	1.345	1.774

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.1316	0.1589	0.83
(2) MULTIVARIATE	0.2616	0.1694	1.54

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	105	1.000	1.000	1.000
NONE	3907	76	1.013	1.021	0.999
UNDER 20	962	18	0.974	0.970	1.001
20	415	9	1.132	0.922	1.002
OVER 20	185	2	0.558	0.876	1.004

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0512	0.1286	-0.40
(2) MULTIVARIATE	0.0015	0.1310	0.01

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	44	1.000	1.000	1.000
NONE	1408	38	1.069	1.083	1.084
UNDER 20	235	5	0.837	0.728	0.723
20	71	1	0.550	0.489	0.483
OVER 20	25	0	0.0	0.328	0.322

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.3979	0.3347	-1.19
(2) MULTIVARIATE	-0.4046	0.3550	-1.14

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5110	7	1.000	1.000	1.000
NO	5016	6	0.873	0.833	0.946
POSSIBLE	67	0	0.0	4.427	2.594
DEFINITE	27	1	28.038	23.528	7.112

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.6705	0.5798	2.88
(2) MULTIVARIATE	1.0087	0.6108	1.65

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	35	1.000	1.000	1.000
NO	7105	33	0.975	0.951	0.995
POSSIBLE	184	1	1.142	1.928	1.115
DEFINITE	61	1	3.483	3.908	1.249

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.7066	0.3706	1.91
(2) MULTIVARIATE	0.1136	0.5243	0.22

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	105	1.000	1.000	1.000
NO	4976	85	0.888	0.888	0.954
POSSIBLE	315	9	1.503	1.633	1.297
DEFINITE	178	11	3.365	3.002	1.765

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.6088	0.1557	3.91
(2) MULTIVARIATE	0.3077	0.1758	1.75

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	44	1.000	1.000	1.000
NO	1508	28	0.729	0.767	0.800
POSSIBLE	139	9	2.667	1.699	1.632
DEFINITE	92	7	3.172	3.761	3.331

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.7948	0.1949	4.08
(2) MULTIVARIATE	0.7134	0.2210	3.23

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE
CHARACTERISTIC: GLUCOSE INTOLERANCE
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5110	7	1.000	1.000	1.000
NO	5027	6	0.871	0.872	0.913
YES	83	1	8.890	8.730	6.259

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	2.3033	1.0852	2.12
(2) MULTIVARIATE	1.9249	1.1334	1.70

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	35	1.000	1.000	1.000
NO	7123	31	0.914	0.937	0.937
YES	227	4	3.749	2.964	2.964

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.1510	0.5290	2.18
(2) MULTIVARIATE	1.1513	0.5661	2.03

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	105	1.000	1.000	1.000
NO	5140	95	0.962	0.968	0.988
YES	329	10	1.601	1.495	1.194

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4346	0.3363	1.29
(2) MULTIVARIATE	0.1899	0.3467	0.55

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	44	1.000	1.000	1.000
NO	1577	40	1.003	1.005	1.045
YES	162	4	0.975	0.950	0.557

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0562	0.5303	-0.11
(2) MULTIVARIATE	-0.6291	0.5849	-1.08

TABLE 2A

RELATIVE AVERAGE ODDS FOR CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS

Men (Table 2A-1)
Women (Table 2A-2)

TABLE 2A-1

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	27	1.000	1.000	1.000
74-109	345	1	0.445	0.688	0.921
110-119	797	5	0.965	0.793	0.952
120-129	1081	9	1.284	0.902	0.981
130-139	943	4	0.651	1.034	1.013
140-149	531	2	0.578	1.180	1.044
150-159	245	3	1.896	1.351	1.078
160-169	107	1	1.443	1.531	1.110
170-179	57	2	5.561	1.752	1.145
180-189	31	0	0.0	2.014	1.182
190-300	19	0	0.0	2.807	1.271

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0137	0.0099	1.38
(2) MULTIVARIATE	0.0032	0.0110	0.29

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	78	1.000	1.000	1.000
74-109	356	2	0.409	0.589	0.622
110-119	968	7	0.527	0.699	0.726
120-129	1239	14	0.826	0.808	0.828
130-139	1233	13	0.770	0.946	0.956
140-149	818	20	1.812	1.104	1.099
150-159	502	8	1.171	1.292	1.268
160-169	270	6	1.643	1.500	1.452
170-179	150	4	1.981	1.748	1.668
180-189	97	2	1.522	2.062	1.938
190-300	85	2	1.742	2.888	2.627

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0157	0.0048	3.30
(2) MULTIVARIATE	0.0143	0.0053	2.70

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	107	1.000	1.000	1.000
74-109	239	2	0.307	0.519	0.647
110-119	499	8	0.593	0.614	0.728
120-129	739	13	0.652	0.713	0.807
130-139	749	18	0.897	0.837	0.902
140-149	599	18	1.128	0.979	1.005
150-159	423	14	1.247	1.149	1.123
160-169	272	8	1.104	1.336	1.247
170-179	192	9	1.791	1.561	1.388
180-189	115	6	2.005	1.811	1.539
190-300	177	11	2.413	2.686	2.005

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0159	0.0033	4.76
(2) MULTIVARIATE	0.0110	0.0037	2.95

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	34	1.000	1.000	1.000
74-109	56	1	0.599	0.450	0.586
110-119	101	0	0.0	0.550	0.675
120-129	163	5	1.043	0.636	0.747
130-139	210	2	0.317	0.757	0.843
140-149	197	12	2.139	0.888	0.943
150-159	156	1	0.213	1.038	1.052
160-169	101	3	1.009	1.210	1.172
170-179	50	2	1.374	1.421	1.311
180-189	43	2	1.608	1.704	1.488
190-300	78	6	2.748	2.668	2.018

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0163	0.0055	2.98
(2) MULTIVARIATE	0.0114	0.0064	1.80

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	27	1.000	1.000	1.000
96-189	762	2	0.402	0.428	0.445
190-204	494	1	0.310	0.575	0.592
205-219	596	2	0.515	0.687	0.703
220-234	659	2	0.466	0.823	0.836
235-249	488	2	0.629	0.984	0.993
250-264	388	6	2.402	1.163	1.167
265-279	276	6	3.398	1.391	1.386
280-294	201	1	0.765	1.673	1.656
295-309	123	2	2.528	2.016	1.983
310-696	169	3	2.764	4.108	3.896

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0119	0.0029	4.13
(2) MULTIVARIATE	0.0115	0.0031	3.70

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	78	1.000	1.000	1.000
96-189	677	6	0.647	0.544	0.581
190-204	597	8	0.982	0.671	0.702
205-219	870	5	0.418	0.762	0.788
220-234	887	13	1.076	0.865	0.885
235-249	752	9	0.876	0.983	0.993
250-264	673	7	0.760	1.104	1.102
265-279	480	9	1.382	1.256	1.239
280-294	330	5	1.112	1.434	1.397
295-309	190	5	1.954	1.621	1.562
310-696	262	11	3.169	2.491	2.266

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0085	0.0021	4.11
(2) MULTIVARIATE	0.0077	0.0021	3.66

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	107	1.000	1.000	1.000
96-189	489	8	0.606	0.758	0.809
190-204	422	7	0.614	0.842	0.878
205-219	544	17	1.175	0.896	0.921
220-234	617	18	1.094	0.956	0.968
235-249	573	19	1.249	1.015	1.015
250-264	512	8	0.578	1.081	1.065
265-279	338	11	1.225	1.152	1.118
280-294	215	6	1.046	1.226	1.174
295-309	146	8	2.111	1.306	1.232
310-696	148	5	1.273	1.501	1.370

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0042	0.0023	1.82
(2) MULTIVARIATE	0.0033	0.0023	1.42

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	34	1.000	1.000	1.000
96-189	141	2	0.474	0.841	0.778
190-204	138	6	1.499	0.903	0.861
205-219	153	4	0.885	0.939	0.910
220-234	183	8	1.507	0.975	0.961
235-249	134	3	0.755	1.015	1.018
250-264	137	2	0.488	1.057	1.078
265-279	107	2	0.628	1.098	1.140
280-294	91	3	1.124	1.142	1.205
295-309	32	3	3.411	1.188	1.276
310-696	39	1	0.868	1.271	1.405

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0026	0.0043	0.61
(2) MULTIVARIATE	0.0038	0.0042	0.91

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                  RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
                OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

             EVENT:  CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
    CHARACTERISTIC:  CIGARETTES SMOKED (NUMBER PER DAY)
 CONTROL VARIABLES:  SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY
                     ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

                  MEN AGED 35-44 AT EXAM                                                MEN AGED 45-54 AT EXAM

            NUMBER           RELATIVE AVERAGE ODDS                           NUMBER           RELATIVE AVERAGE ODDS
 LEVEL     AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2     LEVEL     AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2

   TOTAL   4156      27    1.000     1.000       1.000          TOTAL   5719      78    1.000     1.000       1.000

 NONE      1288       2    0.238     0.489       0.413        NONE      2120      13    0.446     0.588       0.562
 UNDER 20   644       4    0.956     0.735       0.673        UNDER 20   822      10    0.890     0.819       0.803
 20        1142      10    1.351     1.103       1.098        20        1383      31    1.658     1.142       1.146
 OVER 20   1082      11    1.571     1.657       1.790        OVER 20   1393      24    1.268     1.592       1.637

                 B       SE(B)    B/SE(B)                                 B       SE(B)    B/SE(B)

(1) UNIVARIATE    0.4066  0.1729   2.35                   (1) UNIVARIATE    0.3321  0.0972   3.42
(2) MULTIVARIATE  0.4888  0.1904   2.57                   (2) MULTIVARIATE  0.3564  0.1000   3.56

                  MEN AGED 55-64 AT EXAM                                                MEN AGED 65-74 AT EXAM

            NUMBER           RELATIVE AVERAGE ODDS                           NUMBER           RELATIVE AVERAGE ODDS
 LEVEL     AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2     LEVEL     AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2

   TOTAL   4004     107    1.000     1.000       1.000          TOTAL   1155      34    1.000     1.000       1.000

 NONE      1930      36    0.692     0.782       0.705        NONE       690      20    0.984     1.011       0.992
 UNDER 20   664      22    1.248     0.965       0.939        UNDER 20   215       7    1.110     0.996       1.003
 20         788      26    1.243     1.191       1.250        20         144       4    0.942     0.981       1.015
 OVER 20    622      23    1.398     1.470       1.664        OVER 20    106       3    0.960     0.966       1.027

                 B       SE(B)    B/SE(B)                                 B       SE(B)    B/SE(B)

(1) UNIVARIATE    0.2102  0.0812   2.59                   (1) UNIVARIATE   -0.0150  0.1735  -0.09
(2) MULTIVARIATE  0.2861  0.0836   3.42                   (2) MULTIVARIATE  0.0115  0.1754   0.07
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                         RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
                      OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

                 EVENT:  CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
        CHARACTERISTIC:  LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
     CONTROL VARIABLES:  SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
                         GLUCOSE INTOLERANCE

              MEN AGED 35-44 AT EXAM                                           MEN AGED 45-54 AT EXAM

              NUMBER          RELATIVE AVERAGE ODDS                           NUMBER          RELATIVE AVERAGE ODDS
 LEVEL     AT RISK  CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2          LEVEL     AT RISK  CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2

  TOTAL    4156       27    1.000     1.000       1.000              TOTAL    5718       78    1.000     1.000       1.000

 NO        4014       25    0.958     0.981       0.985             NO        5360       72    0.985     0.979       1.001
 POSSIBLE   119        2    2.614     1.438       1.342             POSSIBLE   246        3    0.893     1.217       0.989
 DEFINITE    23        0    0.0       2.108       1.827             DEFINITE   112        3    1.990     1.513       0.977

                  B       SE(B)   B/SE(B)                                          B       SE(B)   B/SE(B)

(1) UNIVARIATE   0.3827  0.6093   0.63                             (1) UNIVARIATE    0.2174  0.2807   0.77
(2) MULTIVARIATE 0.3088  0.6910   0.45                             (2) MULTIVARIATE -0.0119  0.3038  -0.04

              MEN AGED 55-64 AT EXAM                                           MEN AGED 65-74 AT EXAM

              NUMBER          RELATIVE AVERAGE ODDS                           NUMBER          RELATIVE AVERAGE ODDS
 LEVEL     AT RISK  CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2          LEVEL     AT RISK  CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2

  TOTAL    4004      107    1.000     1.000       1.000              TOTAL    1155       34    1.000     1.000       1.000

 NO        3583       80    0.832     0.812       0.847             NO         988       24    0.821     0.812       0.881
 POSSIBLE   252        9    1.194     1.766       1.660             POSSIBLE    91        4    1.516     1.514       1.364
 DEFINITE   169       19    4.613     3.838       3.253             DEFINITE    76        6    2.826     2.823       2.112

                  B       SE(B)   B/SE(B)                                          B       SE(B)   B/SE(B)

(1) UNIVARIATE   0.7764  0.1333   5.83                             (1) UNIVARIATE    0.6228  0.2284   2.73
(2) MULTIVARIATE 0.6727  0.1511   4.45                             (2) MULTIVARIATE  0.4371  0.2679   1.63
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RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: GLUCOSE INTOLERANCE
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	27	1.000	1.000	1.000
NO	4036	26	0.992	0.996	0.998
YES	120	1	1.285	1.133	1.075

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.1285	1.0214	0.13
(2) MULTIVARIATE	0.0749	1.0650	0.07

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	78	1.000	1.000	1.000
NO	5407	67	0.907	0.915	0.915
YES	311	11	2.651	2.474	2.472

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.9943	0.3293	3.02
(2) MULTIVARIATE	0.9935	0.3360	2.96

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	107	1.000	1.000	1.000
NO	3690	95	0.962	0.956	0.981
YES	314	12	1.447	1.517	1.228

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4617	0.3010	1.53
(2) MULTIVARIATE	0.2249	0.3217	0.70

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	34	1.000	1.000	1.000
NO	1040	25	0.812	0.802	0.791
YES	115	9	2.799	2.790	2.889

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.2464	0.4019	3.10
(2) MULTIVARIATE	1.2954	0.4112	3.15

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
74-109	0	0	0.0	0.0	0.0
110-119	0	0	0.0	0.0	0.0
120-129	0	0	0.0	0.0	0.0
130-139	0	0	0.0	0.0	0.0
140-149	0	0	0.0	0.0	0.0
150-159	0	0	0.0	0.0	0.0
160-169	0	0	0.0	0.0	0.0
170-179	0	0	0.0	0.0	0.0
180-189	0	0	0.0	0.0	0.0
190-300	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	17	1.000	1.000	1.000
74-109	680	3	1.911	0.929	1.033
110-119	1275	1	0.339	0.954	1.021
120-129	1459	3	0.889	0.975	1.010
130-139	1430	3	0.907	0.997	1.000
140-149	913	4	1.898	1.021	0.990
150-159	630	2	1.374	1.043	0.980
160-169	368	0	0.0	1.067	0.970
170-179	241	1	1.797	1.091	0.960
180-189	170	0	0.0	1.116	0.951
190-300	184	0	0.0	1.188	0.925

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0023	0.0092	0.25
(2) MULTIVARIATE	-0.0010	0.0109	-0.09

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	45	1.000	1.000	1.000
74-109	215	0	0.0	0.389	0.339
110-119	505	2	0.479	0.479	0.428
120-129	749	3	0.485	0.573	0.523
130-139	915	5	0.662	0.686	0.640
140-149	801	4	0.605	0.824	0.786
150-159	736	4	0.659	0.989	0.965
160-169	519	8	1.887	1.182	1.178
170-179	375	4	1.300	1.415	1.441
180-189	278	7	3.113	1.692	1.761
190-300	376	8	2.620	2.985	3.250

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0184	0.0044	4.21
(2) MULTIVARIATE	0.0206	0.0048	4.32

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	21	1.000	1.000	1.000
74-109	33	0	0.0	0.275	0.415
110-119	99	1	0.835	0.353	0.496
120-129	148	2	1.121	0.433	0.574
130-139	244	1	0.337	0.548	0.678
140-149	287	3	0.864	0.671	0.784
150-159	256	1	0.321	0.835	0.915
160-169	218	0	0.0	1.025	1.059
170-179	168	1	0.490	1.273	1.237
180-189	111	5	3.859	1.593	1.451
190-300	175	7	3.409	2.724	2.098

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0218	0.0069	3.17
(2) MULTIVARIATE	0.0155	0.0077	2.03

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY
BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
96-189	0	0	0.0	0.0	0.0
190-204	0	0	0.0	0.0	0.0
205-219	0	0	0.0	0.0	0.0
220-234	0	0	0.0	0.0	0.0
235-249	0	0	0.0	0.0	0.0
250-264	0	0	0.0	0.0	0.0
265-279	0	0	0.0	0.0	0.0
280-294	0	0	0.0	0.0	0.0
295-309	0	0	0.0	0.0	0.0
310-696	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	7350	17	1.000	1.000	1.000
96-189	741	0	0.0	0.541	0.621
190-204	721	1	0.599	0.639	0.714
205-219	888	2	0.974	0.712	0.783
220-234	1092	1	0.395	0.792	0.855
235-249	965	2	0.896	0.880	0.934
250-264	821	2	1.053	0.975	1.018
265-279	690	1	0.626	1.083	1.112
280-294	511	1	0.846	1.208	1.218
295-309	331	3	3.945	1.343	1.332
310-696	590	4	2.944	2.598	1.997

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0071	0.0021	3.42
(2) MULTIVARIATE	0.0060	0.0022	2.74

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5469	45	1.000	1.000	1.000
96-189	220	4	2.232	0.524	0.557
190-204	289	0	0.0	0.616	0.645
205-219	435	2	0.557	0.681	0.707
220-234	689	3	0.527	0.754	0.776
235-249	666	2	0.363	0.835	0.852
250-264	749	5	0.810	0.921	0.932
265-279	702	9	1.565	1.019	1.021
280-294	558	5	1.090	1.131	1.124
295-309	408	6	1.799	1.256	1.237
310-696	753	9	1.458	1.668	1.599

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0068	0.0029	2.32
(2) MULTIVARIATE	0.0062	0.0029	2.16

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	1739	21	1.000	1.000	1.000
96-189	47	1	1.778	0.281	0.309
190-204	69	0	0.0	0.392	0.422
205-219	123	0	0.0	0.462	0.492
220-234	198	2	0.835	0.551	0.580
235-249	222	2	0.744	0.659	0.685
250-264	237	0	0.0	0.782	0.803
265-279	250	2	0.660	0.934	0.947
280-294	184	4	1.818	1.132	1.134
295-309	139	3	1.805	1.336	1.323
310-696	270	7	2.177	2.125	2.030

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0119	0.0044	2.68
(2) MULTIVARIATE	0.0111	0.0044	2.50

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NONE	0	0	0.0	0.0	0.0
UNDER 20	0	0	0.0	0.0	0.0
20	0	0	0.0	0.0	0.0
OVER 20	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	17	1.000	1.000	1.000
NONE	4126	5	0.523	0.584	0.514
UNDER 20	1776	5	1.218	1.021	0.989
20	1040	3	1.248	1.784	1.902
OVER 20	408	4	4.271	3.119	3.658

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.5584	0.2048	2.73
(2) MULTIVARIATE	0.6538	0.2230	2.93

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	45	1.000	1.000	1.000
NONE	3907	27	0.839	0.895	0.877
UNDER 20	962	12	1.523	1.116	1.131
20	415	4	1.173	1.392	1.459
OVER 20	185	2	1.317	1.736	1.892

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.2209	0.1673	1.32
(2) MULTIVARIATE	0.2546	0.1661	1.53

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	21	1.000	1.000	1.000
NONE	1408	19	1.119	1.137	1.139
UNDER 20	235	2	0.702	0.507	0.499
20	71	0	0.0	0.226	0.219
OVER 20	25	0	0.0	0.101	0.096

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.8077	0.6465	-1.25
(2) MULTIVARIATE	-0.8251	0.6754	-1.22

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
POSSIBLE	0	0	0.0	0.0	0.0
DEFINITE	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
POSSIBLE	0	0	0.0	0.0	0.0
DEFINITE	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5469	45	1.000	1.000	1.000
NO	4976	41	1.001	1.007	1.045
POSSIBLE	315	3	1.159	0.948	0.637
DEFINITE	178	1	0.681	0.892	0.388

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0605	0.3778	-0.16
(2) MULTIVARIATE	-0.4949	0.3980	-1.24

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	1739	21	1.000	1.000	1.000
NO	1508	12	0.656	0.722	0.789
POSSIBLE	139	5	3.053	1.778	1.654
DEFINITE	92	4	3.719	4.378	3.465

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.9011	0.2612	3.45
(2) MULTIVARIATE	0.7396	0.3032	2.44

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: CORONARY HEART DISEASE OTHER THAN ANGINA PECTORIS
CHARACTERISTIC: GLUCOSE INTOLERANCE
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
YES	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	17	1.000	1.000	1.000
NO	7123	14	0.849	0.880	0.881
YES	227	3	5.777	4.779	4.746

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	1.6925	0.6296	2.69
(2) MULTIVARIATE	1.6845	0.7040	2.39

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	45	1.000	1.000	1.000
NO	5140	41	0.969	0.970	0.984
YES	329	4	1.483	1.467	1.249

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4136	0.5268	0.79
(2) MULTIVARIATE	0.2386	0.5334	0.45

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	21	1.000	1.000	1.000
NO	1577	18	0.945	0.952	1.018
YES	162	3	1.544	1.468	0.827

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.4330	0.6267	0.69
(2) MULTIVARIATE	-0.2073	0.7062	-0.29

TABLE 3A
RELATIVE AVERAGE ODDS FOR ANGINA PECTORIS UNCOMPLICATED

Men (Table 3A-1)
Women (Table 3A-2)

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	4156	6	1.000	1.000	1.000
74-109	345	0	0.0	0.730	1.002
110-119	797	1	0.869	0.824	1.001
120-129	1081	2	1.282	0.919	1.001
130-139	943	2	1.470	1.033	1.000
140-149	531	1	1.305	1.156	0.999
150-159	245	0	0.0	1.297	0.998
160-169	107	0	0.0	1.442	0.997
170-179	57	0	0.0	1.618	0.996
180-189	31	0	0.0	1.821	0.995
190-300	19	0	0.0	2.406	0.993

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0116	0.0202	0.57
(2) MULTIVARIATE	-0.0001	0.0242	-0.00

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	5718	30	1.000	1.000	1.000
74-109	356	2	1.071	0.677	0.829
110-119	968	2	0.393	0.771	0.885
120-129	1239	7	1.077	0.860	0.935
130-139	1233	6	0.927	0.969	0.992
140-149	818	4	0.932	1.089	1.052
150-159	502	5	1.907	1.227	1.116
160-169	270	2	1.415	1.373	1.181
170-179	150	0	0.0	1.542	1.252
180-189	97	1	1.975	1.748	1.333
190-300	85	1	2.257	2.247	1.508

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0119	0.0078	1.52
(2) MULTIVARIATE	0.0060	0.0088	0.68

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	4004	58	1.000	1.000	1.000
74-109	239	1	0.286	0.510	0.558
110-119	499	4	0.550	0.607	0.651
120-129	739	8	0.745	0.706	0.744
130-139	749	11	1.014	0.832	0.860
140-149	599	8	0.921	0.976	0.989
150-159	423	6	0.979	1.150	1.143
160-169	272	5	1.274	1.342	1.309
170-179	192	7	2.574	1.572	1.506
180-189	115	3	1.822	1.831	1.722
190-300	177	5	1.978	2.741	2.446

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0162	0.0043	3.73
(2) MULTIVARIATE	0.0143	0.0048	2.95

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	SMOOTHED-1	SMOOTHED-2
TOTAL	1155	13	1.000	1.000	1.000
74-109	56	0	0.0	2.144	2.137
110-119	101	5	4.575	1.640	1.637
120-129	163	2	1.091	1.366	1.365
130-139	210	0	0.0	1.100	1.100
140-149	197	2	0.901	0.899	0.900
150-159	156	2	1.141	0.739	0.741
160-169	101	2	1.775	0.609	0.611
170-179	50	0	0.0	0.499	0.500
180-189	43	0	0.0	0.397	0.399
190-300	78	0	0.0	0.251	0.253

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0205	0.0130	-1.58
(2) MULTIVARIATE	-0.0204	0.0130	-1.57

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4156	6	1.000	1.000	1.000
96-189	762	1	0.909	0.742	0.765
190-204	494	0	0.0	0.839	0.855
205-219	596	0	0.0	0.902	0.913
220-234	659	2	2.106	0.970	0.975
235-249	488	1	1.420	1.043	1.041
250-264	388	0	0.0	1.116	1.106
265-279	276	1	2.515	1.199	1.181
280-294	201	1	3.458	1.292	1.264
295-309	123	0	0.0	1.394	1.353
310-696	169	0	0.0	1.752	1.658

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0048	0.0081	0.60
(2) MULTIVARIATE	0.0044	0.0084	0.52

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	30	1.000	1.000	1.000
96-189	677	0	0.0	0.494	0.555
190-204	597	0	0.0	0.625	0.680
205-219	870	2	0.437	0.722	0.770
220-234	887	9	1.944	0.835	0.871
235-249	752	6	1.525	0.965	0.986
250-264	673	4	1.134	1.100	1.103
265-279	480	2	0.793	1.274	1.251
280-294	330	0	0.0	1.480	1.423
295-309	190	2	2.017	1.703	1.605
310-696	262	5	3.689	2.875	2.423

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0096	0.0029	3.34
(2) MULTIVARIATE	0.0082	0.0029	2.85

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	58	1.000	1.000	1.000
96-189	489	5	0.703	0.711	0.751
190-204	422	3	0.487	0.808	0.837
205-219	544	9	1.145	0.872	0.893
220-234	617	10	1.121	0.943	0.954
235-249	573	5	0.599	1.015	1.015
250-264	512	10	1.355	1.095	1.083
265-279	338	6	1.230	1.182	1.156
280-294	215	3	0.963	1.276	1.234
295-309	146	4	1.916	1.377	1.316
310-696	148	3	1.408	1.638	1.520

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0051	0.0031	1.68
(2) MULTIVARIATE	0.0044	0.0031	1.42

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1155	13	1.000	1.000	1.000
96-189	141	1	0.627	1.263	1.281
190-204	138	1	0.641	1.136	1.144
205-219	153	5	2.968	1.074	1.078
220-234	183	2	0.971	1.017	1.017
235-249	134	0	0.0	0.960	0.957
250-264	137	3	1.967	0.906	0.899
265-279	107	0	0.0	0.857	0.848
280-294	91	0	0.0	0.810	0.798
295-309	32	1	2.834	0.765	0.751
310-696	39	0	0.0	0.697	0.680

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0038	0.0070	-0.54
(2) MULTIVARIATE	-0.0040	0.0070	-0.58

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                          RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
                        OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

                 EVENT:  ANGINA PECTORIS UNCOMPLICATED
        CHARACTERISTIC:  CIGARETTES SMOKED (NUMBER PER DAY)
     CONTROL VARIABLES:  SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY
                         ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

                MEN AGED 35-44 AT EXAM                                             MEN AGED 45-54 AT EXAM

            NUMBER           RELATIVE AVERAGE ODDS                             NUMBER           RELATIVE AVERAGE ODDS
LEVEL      AT RISK  CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2         LEVEL      AT RISK  CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2

  TOTAL     4156      6     1.000     1.000       1.000              TOTAL     5718     30     1.000     1.000       1.000

NONE        1288      1     0.537     0.375       0.512            NONE       2120     10     0.899     0.851       0.824
UNDER 20     644      0     0.0       0.639       0.752            UNDER 20    822      3     0.695     0.952       0.941
20          1142      3     1.822     1.091       1.103            20         1383      8     1.103     1.065       1.075
OVER 20     1082      2     1.281     1.863       1.620            OVER 20    1393      9     1.233     1.191       1.228

                    B      SE(B)   B/SE(B)                                             B      SE(B)   B/SE(B)

(1) UNIVARIATE    0.5348  0.3720   1.44                           (1) UNIVARIATE    0.1121  0.1443   0.78
(2) MULTIVARIATE  0.3838  0.3798   1.01                           (2) MULTIVARIATE  0.1327  0.1542   0.86

                MEN AGED 55-64 AT EXAM                                             MEN AGED 65-74 AT EXAM

            NUMBER           RELATIVE AVERAGE ODDS                             NUMBER           RELATIVE AVERAGE ODDS
LEVEL      AT RISK  CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2         LEVEL      AT RISK  CASES   ACTUAL  SMOOTHED-1  SMOOTHED-2

  TOTAL     4004     58     1.000     1.000       1.000              TOTAL     1155     13     1.000     1.000       1.000

NONE        1930     29     1.038     1.043       0.982            NONE        690      8     1.030     0.863       0.872
UNDER 20     664      9     0.935     1.000       0.999            UNDER 20    215      0     0.0       1.035       1.034
20           788     10     0.874     0.958       1.017            20          144      3     1.869     1.242       1.227
OVER 20      622     10     1.112     0.919       1.034            OVER 20     106      2     1.689     1.489       1.456

                    B      SE(B)   B/SE(B)                                             B      SE(B)   B/SE(B)

(1) UNIVARIATE   -0.0423  0.1141  -0.37                           (1) UNIVARIATE    0.1818  0.2521   0.72
(2) MULTIVARIATE  0.0173  0.1170   0.15                           (2) MULTIVARIATE  0.1711  0.2563   0.67
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RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED, GLUCOSE INTOLERANCE

MEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
POSSIBLE	0	0	0.0	0.0	0.0
DEFINITE	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

MEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5718	30	1.000	1.000	1.000
NO	5360	25	0.888	0.913	0.929
POSSIBLE	246	3	2.341	1.779	1.657
DEFINITE	112	2	3.447	3.469	2.954

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.6676	0.3172	2.10
(2) MULTIVARIATE	0.5783	0.3545	1.63

MEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	4004	58	1.000	1.000	1.000
NO	3583	50	0.963	0.934	0.984
POSSIBLE	252	2	0.544	1.333	1.088
DEFINITE	169	6	2.504	1.904	1.203

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.3561	0.2194	1.62
(2) MULTIVARIATE	0.1003	0.2460	0.41

MEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	0	0	0.0	0.0	0.0
NO	0	0	0.0	0.0	0.0
POSSIBLE	0	0	0.0	0.0	0.0
DEFINITE	0	0	0.0	0.0	0.0

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0	0.0	0.0
(2) MULTIVARIATE	0.0	0.0	0.0

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                 RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
               OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

             EVENT:  ANGINA PECTORIS UNCCMPLICATED
    CHARACTERISTIC:  GLUCOSE INTCLERANCE
 CONTRCL VARIABLES:  SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMCKED,
                     LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM

            MEN AGED 35-44 AT EXAM                                          MEN AGED 45-54 AT EXAM

         NUMBER           RELATIVE AVERAGE ODDS                         NUMBER           RELATIVE AVERAGE ODDS
LEVEL  AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2          LEVEL  AT RISK  CASES  ACTUAL  SMOOTHED-1  SMCCTHED-2

 TCTAL    0       0     0.0       0.C        C.C                TOTAL   5718     30    1.000     1.000       1.000

NO        0       0     C.C       0.C        C.C               NO       5407     28    0.987     0.995       C.993
YES       0       0     0.0       0.0        0.0               YES       311      2    1.227     1.082       1.119

                  B     SE(B)   B/SE(B)                                          B      SE(B)   B/SE(B)

(1) UNIVARIATE    0.0    C.C     0.C                         (1) UNIVARIATE    0.0840  0.7317   0.11
(2) MULTIVARIATE  0.0    0.0     0.0                         (2) MULTIVARIATE  0.1191  0.7374   0.16

            MEN AGED 55-64 AT EXAM                                          MEN AGEC 65-74 AT EXAM

         NUMBER           RELATIVE AVERAGE CDDS                         NUMBER           RELATIVE AVERAGE ODDS
LEVEL  AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2          LEVEL  AT RISK  CASES  ACTUAL  SMCCTHEC-1  SMOOTHED-2

 TCTAL  4004     58    1.CCC     1.CCC       1.000              TCTAL   1155     13    1.000     1.000       1.000

NO      369C     52    C.972     0.961       0.983             NO       1040     12    1.025     1.025       1.022
YES      314      6    1.325     1.453       1.200             YES       115      1    0.771     0.777       0.805

                  B     SE(B)   B/SE(B)                                          B      SE(B)   B/SE(B)

(1) UNIVARIATE    0.4126  0.4C55  1.02                       (1) UNIVARIATE   -0.2770  1.0455  -C.26
(2) MULTIVARIATE  0.1996  0.4416  0.45                       (2) MULTIVARIATE -0.2387  1.0526  -0.23
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RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: BLOOD PRESSURE, FIRST EXAMINER, SYSTOLIC (MM HG)
CONTROL VARIABLES: SERUM CHOLESTEROL, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5110	5	1.000	1.000	1.000
74-109	961	0	0.0	0.541	0.629
110-119	1356	0	0.0	0.711	0.781
120-129	1218	3	2.521	0.913	0.951
130-139	795	0	0.0	1.161	1.150
140-149	401	1	2.552	1.501	1.409
150-159	205	1	5.005	1.896	1.694
160-169	89	0	0.0	2.409	2.047
170-179	41	0	0.0	3.156	2.533
180-189	23	0	0.0	3.996	3.052
190-300	21	0	0.0	7.849	5.039

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0249	0.0176	1.41
(2) MULTIVARIATE	0.0197	0.0222	0.89

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	18	1.000	1.000	1.000
74-109	680	1	0.600	0.000	0.445
110-119	1275	2	0.640	0.000	0.566
120-129	1459	4	1.120	0.000	0.693
130-139	1430	2	0.570	0.000	0.850
140-149	913	1	0.447	0.000	1.048
150-159	630	1	0.648	0.000	1.280
160-169	368	2	2.226	0.000	1.570
170-179	241	1	1.697	0.000	1.927
180-189	170	1	2.410	0.000	2.365
190-300	184	3	6.751	39.946	4.849

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.2462	0.0053	46.77
(2) MULTIVARIATE	0.0207	0.0071	2.93

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	60	1.000	1.000	1.000
74-109	215	1	0.421	0.365	0.494
110-119	505	0	0.0	0.455	0.581
120-129	749	7	0.850	0.550	0.668
130-139	915	5	0.495	0.665	0.768
140-149	801	7	0.795	0.807	0.885
150-159	736	8	0.991	0.979	1.020
160-169	519	6	1.054	1.181	1.171
170-179	375	12	2.980	1.428	1.346
180-189	278	2	0.653	1.724	1.546
190-300	376	12	2.972	3.045	2.297

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0194	0.0036	5.38
(2) MULTIVARIATE	0.0142	0.0042	3.42

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	23	1.000	1.000	1.000
74-109	33	0	0.0	0.481	0.603
110-119	99	0	0.0	0.559	0.671
120-129	148	1	0.508	0.632	0.732
130-139	244	4	1.243	0.728	0.809
140-149	287	4	1.055	0.824	0.883
150-159	256	4	1.184	0.939	0.970
160-169	218	0	0.0	1.063	1.059
170-179	168	0	0.0	1.212	1.162
180-189	111	4	2.789	1.387	1.279
190-300	175	6	2.649	1.888	1.584

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0132	0.0071	1.84
(2) MULTIVARIATE	0.0093	0.0075	1.24

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: SERUM CHOLESTEROL (MG/100ML)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, CIGARETTES SMOKED, LEFT VENTRICULAR HYPERTROPHY
BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5110	5	1.000	1.000	1.000
96-189	1457	0	0.0	0.237	0.191
190-204	890	0	0.0	0.388	0.324
205-219	743	2	2.756	0.535	0.457
220-234	675	0	0.0	0.730	0.639
235-249	490	0	0.0	1.008	0.904
250-264	316	0	0.0	1.347	1.235
265-279	221	1	4.641	1.866	1.752
280-294	151	1	6.807	2.557	2.459
295-309	76	0	0.0	3.584	3.534
310-696	91	1	11.344	16.908	21.013

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0210	0.0044	4.77
(2) MULTIVARIATE	0.0226	0.0052	4.37

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	18	1.000	1.000	1.000
96-189	741	1	0.550	0.918	1.011
190-204	721	2	1.133	0.945	1.007
205-219	888	4	1.843	0.962	1.005
220-234	1092	1	0.373	0.980	1.002
235-249	965	4	1.695	0.997	1.000
250-264	821	1	0.497	1.015	0.998
265-279	690	0	0.0	1.033	0.996
280-294	511	2	1.601	1.052	0.993
295-309	331	1	1.234	1.071	0.991
310-696	590	2	1.385	1.123	0.985

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0012	0.0048	0.25
(2) MULTIVARIATE	-0.0002	0.0051	-0.03

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	60	1.000	1.000	1.000
96-189	220	2	0.827	0.698	0.715
190-204	289	2	0.628	0.766	0.781
205-219	435	4	0.837	0.812	0.824
220-234	689	8	1.059	0.861	0.870
235-249	666	6	0.820	0.913	0.920
250-264	749	6	0.728	0.966	0.970
265-279	702	7	0.908	1.024	1.024
280-294	558	8	1.311	1.088	1.083
295-309	408	4	0.893	1.156	1.146
310-696	753	13	1.584	1.353	1.326

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0039	0.0027	1.47
(2) MULTIVARIATE	0.0037	0.0027	1.38

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	23	1.000	1.000	1.000
96-189	47	0	0.0	0.315	0.309
190-204	69	1	1.097	0.428	0.423
205-219	123	0	0.0	0.497	0.492
220-234	198	2	0.761	0.585	0.580
235-249	222	2	0.678	0.690	0.685
250-264	237	3	0.957	0.807	0.803
265-279	250	4	1.213	0.950	0.948
280-294	184	1	0.408	1.134	1.134
295-309	139	4	2.211	1.321	1.323
310-696	270	6	1.696	2.013	2.029

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	0.0110	0.0043	2.55
(2) MULTIVARIATE	0.0111	0.0044	2.55

RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

EVENT: ANGINA PECTORIS UNCOMPLICATED
CHARACTERISTIC: CIGARETTES SMOKED (NUMBER PER DAY)
CONTROL VARIABLES: SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM, GLUCOSE INTOLERANCE

WOMEN AGED 35-44 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5110	5	1.000	1.000	1.000
NONE	2325	2	0.879	1.011	0.955
UNDER 20	1656	2	1.235	0.998	1.008
20	828	1	1.235	0.985	1.065
OVER 20	301	0	0.0	0.972	1.125

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.0130	0.4983	-0.03
(2) MULTIVARIATE	0.0547	0.5058	0.11

WOMEN AGED 45-54 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	7350	18	1.000	1.000	1.000
NONE	4126	13	1.287	1.266	1.167
UNDER 20	1776	3	0.689	0.814	0.899
20	1040	1	0.392	0.523	0.692
OVER 20	408	1	1.001	0.336	0.533

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.4420	0.2980	-1.48
(2) MULTIVARIATE	-0.2610	0.3152	-0.83

WOMEN AGED 55-64 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	5469	60	1.000	1.000	1.000
NONE	3907	49	1.145	1.118	1.105
UNDER 20	962	6	0.566	0.809	0.833
20	415	5	1.099	0.586	0.628
OVER 20	185	0	0.0	0.424	0.474

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.3231	0.2024	-1.60
(2) MULTIVARIATE	-0.2825	0.2127	-1.33

WOMEN AGED 65-74 AT EXAM

LEVEL	NUMBER AT RISK	NUMBER CASES	RELATIVE AVERAGE ODDS ACTUAL	RELATIVE AVERAGE ODDS SMOOTHED-1	RELATIVE AVERAGE ODDS SMOOTHED-2
TOTAL	1739	23	1.000	1.000	1.000
NONE	1408	19	1.021	1.037	1.036
UNDER 20	235	3	0.965	0.887	0.890
20	71	1	1.066	0.759	0.764
OVER 20	25	0	0.0	0.649	0.655

	B	SE(B)	B/SE(B)
(1) UNIVARIATE	-0.1562	0.3865	-0.40
(2) MULTIVARIATE	-0.1527	0.4080	-0.37

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                      RELATIVE AVERAGE ODDS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
                    OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

                  EVENT:  ANGINA PECTORIS UNCOMPLICATED
         CHARACTERISTIC:  LEFT VENTRICULAR HYPERTROPHY BY ELECTROCARDIOGRAM
      CONTROL VARIABLES:  SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
                          GLUCOSE INTOLERANCE

               WOMEN AGED 35-44 AT EXAM                                       WOMEN AGED 45-54 AT EXAM

            NUMBER         RELATIVE AVERAGE ODDS                         NUMBER         RELATIVE AVERAGE ODDS
  LEVEL    AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2       LEVEL    AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2

    TOTAL      0      0     0.0       0.0        0.0            TOTAL    7350     18    1.000     1.000       1.000

  NO           0      0     0.0       0.0        0.0          NO         7105     16    0.919     0.890       0.984
  POSSIBLE     0      0     0.0       0.0        0.0          POSSIBLE    184      1    2.226     2.755       1.342
  DEFINITE     0      0     0.0       0.0        0.0          DEFINITE     61      1    6.789     8.533       1.830

                   B      SE(B)   B/SE(B)                                      B      SE(B)   B/SE(B)

(1) UNIVARIATE    0.0      0.0      0.0                     (1) UNIVARIATE    1.1303  0.3717   3.04
(2) MULTIVARIATE  0.0      0.0      0.0                     (2) MULTIVARIATE  0.3103  0.5470   0.57

               WOMEN AGED 55-64 AT EXAM                                       WOMEN AGED 65-74 AT EXAM

            NUMBER         RELATIVE AVERAGE ODDS                         NUMBER         RELATIVE AVERAGE ODDS
  LEVEL    AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2       LEVEL    AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2

    TOTAL   5469     60    1.000     1.000       1.000          TOTAL    1739     23    1.000     1.000       1.000

  NO        4976     44    0.804     0.814       0.877        NO         1508     16    0.800     0.826       0.830
  POSSIBLE   315      6    1.750     1.926       1.683        POSSIBLE    139      4    2.211     1.572       1.561
  DEFINITE   178     10    5.366     4.555       3.228        DEFINITE     92      3    2.515     2.992       2.935

                   B      SE(B)   B/SE(B)                                      B      SE(B)   B/SE(B)

(1) UNIVARIATE    0.8609  0.1733   4.97                     (1) UNIVARIATE    0.6437  0.2836   2.27
(2) MULTIVARIATE  0.6515  0.2008   3.24                     (2) MULTIVARIATE  0.6313  0.3125   2.02
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                         RELATIVE AVERAGE CDCS OF SPECIFIED EVENT BY SEX, AGE, AND LEVEL
                        OF CHARACTERISTIC AT EXAM: FRAMINGHAM HEART STUDY, 16-YEAR FOLLOW-UP

                  EVENT:  ANGINA PECTCRIS UNCCMPLICATED
         CHARACTERISTIC:  GLUCOSE INTOLERANCE
      CCNTRCL VARIABLES:  SYSTOLIC BLOOD PRESSURE, SERUM CHOLESTEROL, CIGARETTES SMOKED,
                          LEFT VENTRICULAR HYPERTRCPHY BY ELECTROCARDIOGRAM

               WOMEN AGED 35-44 AT EXAM                                    WOMEN AGED 45-54 AT EXAM

          NUMBER         RELATIVE AVERAGE ODDS                       NUMBER         RELATIVE AVERAGE CCDS
 LEVEL   AT RISK  CASES  ACTUAL  SMOOTHED-1  SMCCTHED-2    LEVEL   AT RISK  CASES  ACTUAL  SMOOTHED-1  SMOOTHED-2

   TCTAL     0      0     0.0       0.0        0.0          TOTAL   735C     18    1.CCC     1.0C0       1.000

 NC          0      0     0.0       0.C        C.C        NO       7123     17    0.974     0.988       0.985
 YES         0      0     0.0       0.0        0.0        YES       227      1    1.802     1.371       1.481

                B      SE(B)   B/SE(B)                                    B      SE(B)   B/SE(B)

(1) UNIVARIATE    0.0     0.0      0.0                  (1) UNIVARIATE    0.3273  1.0245   0.32
(2) MULTIVARIATE  0.0     0.0      0.0                  (2) MULTIVARIATE  0.4085  1.0385   C.39

               WOMEN ACEC 55-64 AT EXAM                                    WCMEN AGED 65-74 AT EXAM

          NUMBER         RELATIVE AVERAGE CDDS                       NUMBER         RELATIVE AVERAGE ODDS
 LEVEL   AT RISK  CASES  ACTUAL  SMOOTHEC-1  SMOOTHED-2    LEVEL   AT RISK  CASES  ACTUAL  SMOOTHED-1  SMCCTHED-2

   TCTAL  5469     60    1.000     1.CCC       1.CCC        TCTAL   1739     23    1.000     1.000       1.000

 NO       514C     54    C.957     C.968       C.989      NC       1577     22    1.056     1.055       1.073
 YES       329      6    1.675     1.503       1.169      YES       162      1    0.463     0.462       0.285

                B      SE(B)   B/SE(B)                                    B      SE(B)   B/SE(B)

(1) UNIVARIATE    C.4405  0.4318   1.02                 (1) UNIVARIATE   -0.8264  1.0258  -C.81
(2) MULTIVARIATE  0.1670  0.4475   0.37                 (2) MULTIVARIATE -1.3262  1.0667  -1.24
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